



1	Q	I	V	L	T	Q	S	P	A	I	M	S	A	S	P	G	E	K	V	T
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
21	I	T	C	S	A	S	S	S	I		S	Y	M	H	W	F	Q	Q	K	P
21	I	T	C	<u>R</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>	<u>I</u>	<u>N</u>	<u>T</u>	<u>W</u>	<u>L</u>	<u>A</u>	<u>W</u>	<u>Y</u>	<u>Q</u>	<u>Q</u>	<u>K</u>	<u>P</u>
40	G	T	S	P	K	L	W	I	Y	T	T	S	N	L	A	S	G	V	P	A
41	G	K	A	P	K	L	L	<u>M</u>	<u>Y</u>	<u>K</u>	<u>A</u>	<u>S</u>	<u>S</u>	<u>L</u>	<u>E</u>	<u>S</u>	G	V	P	<u>S</u>
60	R	F	S	G	S	G	S	G	T	S	Y	S	L	T	I	S	R	M	E	A
61	R	F	<u>I</u>	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P
80	E	D	A	A	T	Y	Y	C	H	Q	R	S	T	Y	P	L	T	F	G	S
81	D	D	F	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>Y</u>	<u>N</u>	<u>S</u>	<u>D</u>	<u>S</u>	<u>K</u>	<u>M</u>	<u>F</u>	<u>G</u>	<u>Q</u>
100	G	T	K	L	E	L	K													
101	G	T	K	V	E	V	K													

FIGURE 1A

1	Q	V	Q	L	Q	Q	S	G	A	E	L	A	K	P	G	A	S	V	K	M
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	A	S	G	<u>Y</u>	<u>T</u>	<u>F</u>	<u>T</u>	<u>S</u>	<u>Y</u>	<u>R</u>	<u>M</u>	<u>H</u>	<u>W</u>	<u>V</u>	<u>K</u>	<u>Q</u>	<u>R</u>
21	S	C	K	A	S	G	<u>G</u>	<u>T</u>	<u>F</u>	<u>S</u>	<u>R</u>	<u>S</u>	<u>A</u>	<u>I</u>	<u>I</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	G	Q	G	L	E	W	I	G	Y	I	N	P	S	T	G	Y	T	E	Y
41	P	G	Q	G	L	E	W	<u>M</u>	<u>G</u>	<u>G</u>	<u>I</u>	<u>V</u>	<u>P</u>	<u>M</u>	<u>F</u>	<u>G</u>	<u>P</u>	<u>P</u>	<u>N</u>	<u>Y</u>
61	N	Q	K	F	K	D	K	A	T	L	T	A	D	K	S	S	S	T	A	Y
61	<u>A</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>Q</u>	<u>G</u>	<u>R</u>	<u>V</u>	<u>T</u>	<u>I</u>	<u>T</u>	<u>A</u>	<u>D</u>	<u>E</u>	<u>S</u>	<u>T</u>	<u>N</u>	<u>T</u>	<u>A</u>	<u>Y</u>
81	M	Q	L	S	S	L	T	F	E	D	S	A	V	Y	Y	C	A	R	G	
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>F</u>	<u>Y</u>	<u>F</u>	<u>C</u>	<u>A</u>	<u>G</u>	<u>G</u>	<u>Y</u>
100	G	G	V	F	D	Y	W	G	Q	G	T	T	L	T	V	S	S			
101	<u>G</u>	<u>I</u>	<u>Y</u>	<u>S</u>	<u>P</u>	<u>E</u>	<u>E</u>	<u>Y</u>	<u>N</u>	<u>G</u>	<u>G</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>	<u>S</u>	<u>S</u>			

FIGURE 1B



1	D	I	V	L	T	Q	S	P	A	S	L	A	V	S	L	G	Q	R	A	T
1	E	I	V	M	T	Q	S	P	<u>A</u>	T	L	S	V	S	P	G	E	R	A	T
21	I	S	C	R	A	S	Q	S	V	S	T	S	T	Y	N	Y	M	H	W	Y
21	L	S	C	<u>R</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>	<u>V</u>	<u>S</u>	<u>T</u>	<u>S</u>	<u>T</u>	<u>Y</u>	<u>N</u>	<u>Y</u>	<u>M</u>	<u>H</u>	<u>W</u>	<u>Y</u>
41	Q	Q	K	P	G	Q	P	P	K	L	L	I	K	Y	A	S	N	L	E	S
41	Q	Q	K	P	<u>G</u>	<u>Q</u>	S	P	R	L	L	I	<u>K</u>	<u>Y</u>	<u>A</u>	<u>S</u>	<u>N</u>	<u>L</u>	<u>E</u>	<u>S</u>
61	G	V	P	A	R	F	S	G	S	G	F	G	T	D	F	T	L	N	I	H
61	G	I	P	A	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S
81	P	V	E	E	E	D	T	V	T	Y	Y	C	Q	H	S	W	E	I	P	Y
81	<u>R</u>	<u>L</u>	<u>E</u>	<u>S</u>	<u>E</u>	<u>D</u>	<u>F</u>	<u>A</u>	<u>V</u>	<u>Y</u>	<u>Y</u>	<u>C</u>	<u>Q</u>	<u>H</u>	<u>S</u>	<u>W</u>	<u>E</u>	<u>I</u>	<u>P</u>	<u>Y</u>
101	T	F	G	G	G	T	K	L	E	I	K									
101	T	F	G	Q	G	T	R	V	E	I	K									

FIGURE 2A

1	E	M	I	L	V	E	S	G	G	G	L	V	K	P	G	A	S	L	K	L
1	E	V	Q	L	L	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	L
21	S	C	A	A	S	G	F	T	F	S	N	Y	G	L	S	W	V	R	Q	T
21	S	C	A	A	S	G	F	T	F	S	<u>N</u>	<u>Y</u>	<u>G</u>	<u>L</u>	<u>S</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	S	D	R	R	L	E	W	V	A	S	I	S	R	G	G	G	R	I	Y	S
41	P	G	K	G	L	E	W	V	A	<u>S</u>	<u>I</u>	<u>S</u>	<u>R</u>	<u>G</u>	<u>G</u>	<u>G</u>	<u>R</u>	<u>I</u>	<u>Y</u>	<u>S</u>
61	P	D	N	L	K	G	R	F	T	I	S	R	E	D	A	K	N	T	L	Y
61	<u>P</u>	<u>D</u>	<u>N</u>	<u>L</u>	<u>K</u>	<u>G</u>	<u>R</u>	<u>F</u>	<u>T</u>	<u>I</u>	<u>S</u>	<u>R</u>	<u>N</u>	<u>D</u>	<u>S</u>	<u>K</u>	<u>N</u>	<u>T</u>	<u>L</u>	<u>Y</u>
81	L	Q	M	S	S	L	K	S	E	D	T	A	L	Y	Y	C	L	R	E	G
81	L	<u>Q</u>	<u>M</u>	<u>N</u>	<u>S</u>	<u>L</u>	<u>Q</u>	<u>A</u>	<u>E</u>	<u>D</u>	<u>T</u>	<u>A</u>	<u>L</u>	<u>Y</u>	<u>Y</u>	<u>C</u>	<u>L</u>	<u>R</u>	<u>E</u>	<u>G</u>
101	I	Y	Y	A	D	Y	G	F	F	D	V	W	G	T	G	T	T	V	I	V
101	<u>I</u>	<u>Y</u>	<u>Y</u>	<u>A</u>	<u>D</u>	<u>Y</u>	<u>G</u>	<u>F</u>	<u>F</u>	<u>D</u>	<u>V</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>
121	S	S																		
121	S	S																		

FIGURE 2B

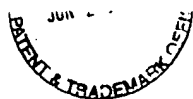


1	D	I	V	M	T	Q	S	H	K	F	M	S	T	S	V	G	D	R	V	S
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
21	I	T	C	K	A	S	Q	D	V	G	S	A	V	V	W	H	Q	Q	K	S
21	I	T	C	<u>K</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>D</u>	<u>V</u>	<u>G</u>	<u>S</u>	<u>A</u>	<u>V</u>	<u>V</u>	<u>W</u>	<u>H</u>	Q	Q	K	P
41	G	Q	S	P	K	L	L	I	Y	W	A	S	T	R	H	T	G	V	P	D
41	G	K	A	P	<u>K</u>	<u>L</u>	<u>L</u>	<u>I</u>	<u>Y</u>	<u>W</u>	<u>A</u>	<u>S</u>	<u>T</u>	<u>R</u>	<u>H</u>	<u>T</u>	<u>G</u>	<u>V</u>	<u>P</u>	<u>S</u>
61	R	F	T	G	S	G	S	G	T	D	F	T	L	T	I	T	N	V	Q	S
61	R	F	<u>T</u>	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P
81	E	D	L	A	D	Y	F	C	Q	Q	Y	S	I	F	P	L	T	F	G	A
81	D	D	F	A	T	Y	<u>F</u>	<u>C</u>	<u>Q</u>	<u>Q</u>	<u>Y</u>	<u>S</u>	<u>I</u>	<u>F</u>	<u>P</u>	<u>L</u>	<u>T</u>	<u>F</u>	<u>G</u>	<u>Q</u>
101	G	T	R	L	E	L	K													
101	G	T	K	V	E	V	K													

FIGURE 3A

1	Q	V	Q	L	Q	Q	S	D	A	E	L	V	K	P	G	A	S	V	K	I
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	V	S	G	Y	T	F	T	D	H	T	I	H	W	M	K	Q	R
21	S	C	K	A	S	G	<u>Y</u>	<u>T</u>	<u>F</u>	<u>T</u>	<u>D</u>	<u>H</u>	<u>T</u>	<u>I</u>	<u>H</u>	<u>W</u>	<u>M</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	E	Q	G	L	E	W	F	G	Y	I	Y	P	R	D	G	H	T	R	Y
41	P	G	Q	G	L	E	<u>W</u>	<u>F</u>	<u>G</u>	<u>Y</u>	<u>I</u>	<u>Y</u>	<u>P</u>	<u>R</u>	<u>D</u>	<u>G</u>	<u>H</u>	<u>T</u>	<u>R</u>	<u>Y</u>
61	S	E	K	F	K	G	K	A	T	L	T	A	D	K	S	A	S	T	A	Y
61	<u>A</u>	<u>E</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>G</u>	<u>K</u>	<u>A</u>	<u>T</u>	<u>I</u>	<u>T</u>	<u>A</u>	<u>D</u>	<u>E</u>	<u>S</u>	<u>T</u>	<u>N</u>	<u>T</u>	<u>A</u>	<u>Y</u>
81	M	H	L	N	S	L	T	S	E	D	S	A	V	Y	F	C	A	R	G	R
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	<u>Y</u>	<u>F</u>	<u>C</u>	<u>A</u>	<u>R</u>	<u>G</u>	<u>R</u>
101	D	S	R	E	R	N	G	F	A	Y	W	G	Q	G	T	L	V	T	V	S
101	<u>D</u>	<u>S</u>	<u>R</u>	<u>E</u>	<u>R</u>	<u>N</u>	<u>G</u>	<u>F</u>	<u>A</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>	<u>S</u>
121	A																			
121	S																			

FIGURE 3B



1	D	I	V	L	T	Q	S	P	A	S	L	A	V	S	L	G	Q	R	A	T
1	D	I	Q	M	T	Q	S	P	S	<u>S</u>	L	S	A	S	V	G	D	R	V	T
21	I	S	C	R	A	S	E	S	V	D	N	Y	G	I	S	F	M	N	W	F
21	I	T	C	<u>R</u>	A	S	E	S	V	D	N	Y	G	I	S	F	M	N	W	<u>F</u>
41	Q	Q	K	P	G	Q	P	P	K	L	L	I	Y	A	A	S	N	Q	G	S
41	Q	Q	K	P	G	K	A	P	K	L	L	<u>I</u>	Y	A	A	S	N	Q	G	S
61	G	V	P	A	R	F	S	G	S	G	S	G	T	D	F	S	L	N	I	H
61	G	V	P	S	R	F	<u>S</u>	G	S	G	S	G	T	<u>D</u>	F	T	L	N	I	S
81	P	M	E	E	D	D	T	A	M	Y	F	C	Q	Q	S	K	E	V	P	W
81	S	L	Q	P	D	D	F	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	S	K	E	V	P	W
101	T	F	G	G	G	T	K	L	E	I	K									
101	<u>T</u>	F	G	Q	G	T	K	V	E	<u>I</u>	K									

FIGURE 4A

1	E	V	Q	L	Q	Q	S	G	P	E	L	V	K	P	G	A	S	V	K	I
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	A	S	G	Y	T	F	T	D	Y	N	M	H	W	V	K	Q	S
21	S	C	K	A	S	G	<u>Y</u>	T	F	<u>T</u>	D	Y	N	M	H	W	V	R	Q	A
41	H	G	K	S	L	E	W	I	G	Y	I	Y	P	Y	N	G	G	T	G	Y
41	P	G	Q	G	L	E	W	<u>I</u>	G	Y	I	Y	P	Y	N	G	G	T	G	Y
61	N	Q	K	F	K	S	K	A	T	L	T	V	D	N	S	S	S	T	A	Y
61	<u>N</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>S</u>	<u>K</u>	<u>A</u>	T	I	T	A	D	E	S	T	N	T	A	Y
81	M	D	V	R	S	L	T	S	E	D	S	A	V	Y	Y	C	A	R	G	R
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	<u>Y</u>	<u>Y</u>	C	A	<u>R</u>	<u>G</u>	<u>R</u>
101	P	A	M	D	Y	W	G	Q	G	T	S	V	T	V	S	S				
101	<u>P</u>	<u>A</u>	<u>M</u>	<u>D</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	L	V	T	V	S	S				

FIGURE 4B



1 Q I V L T Q S P A I M S A S P G E K V T
1 D I Q M T Q S P S S L S A S V G D R V T

21 M T C S G S S S V S F M Y W Y Q Q R P G
21 I T C S G S S S V S F M Y W Y Q Q K P G

41 S S P R L L I Y D T S N L A S G V P V R
41 K A P K L L I Y D T S N L A S G V P S R

61 F S G S G S G T S Y S L T I S R M E A E
61 F S G S G S G T D Y T F T I S S L Q P E

81 D A A T Y Y C Q Q W S T Y P L T F G A G
81 D I A T Y Y C Q Q W S T Y P L T F G Q G

101 T K L E L K
101 T K V E V K

FIGURE 5A

1 Q V Q L K Q S G P G L V Q P S Q S L S I
1 E V Q L L E S G G G L V Q P G G S L R L

21 T C T V S G F S V T S Y G V H W I R Q S
21 S C A A S G F T V T S Y G V H W V R Q A

41 P G K G L E W L G V I W S G G S T D Y N
41 P G K G L E W V G V I W S G G S T D Y N

61 A A F I S R L T I S K D N S K S Q V F F
61 A A F I S R F T I S R D N S K N T L Y L

81 K V N S L Q P A D T A I Y Y C A R A G D
81 Q M N S L Q A E D T A I Y Y C A R A G D

101 Y N Y D G F A Y W G Q G T L V T V S A
101 Y N Y D G F A Y W G Q G T L V T V S S

FIGURE 5B



1	D I V L T Q S P A T L S V T P G D S V S
1	E I V L T Q S P G T L S L S P G E R A T
21	L S C R A S Q S I S N N L H W Y Q Q K S
21	L S C <u>R A S Q S I S N N L H</u> W Y Q Q K P
41	H E S P R L L I K Y A S Q S I S G I P S
41	G Q A P R L L I <u>K Y A S Q S I S</u> G I P D
61	R F S G S G S G T D F T L S V N G V E T
61	R F S G S G S G T D F T L T I S R L E P
81	E D F G M Y F C Q Q S N S W P H T F G G
81	E D F A V Y Y C <u>Q Q S N S W P H T</u> F G Q
101	G T K L E I K
101	G T K V E I K

FIGURE 6A

1	E V Q L Q Q S G P E L V K P G A S M K I
1	Q V Q L <u>V</u> Q S G A E V K K P G S S V R V
21	S C K A S V Y S F T G Y T M N W V K Q S
21	S C K <u>A</u> S G <u>Y S</u> F <u>T G Y T M N</u> W V R Q A
41	H G Q N L E W I G L I N P Y N G G T S Y
41	P G K G L E W V G <u>L I N P Y N G G T S</u> Y
61	N Q K F K G K A T L T V D K S S N T A Y
61	<u>N Q K F K G</u> R V <u>T</u> V S L K P S F N Q A <u>Y</u>
81	M E L L S L T S A D S A V Y Y C T R R G
81	M E L S S L F S E D T A V Y Y C <u>T R</u> <u>R G</u>
101	F R D Y S M D Y W G Q G T S V T V S S
101	<u>F R D Y S M D Y</u> W G Q G T L V T V S S

FIGURE 6B

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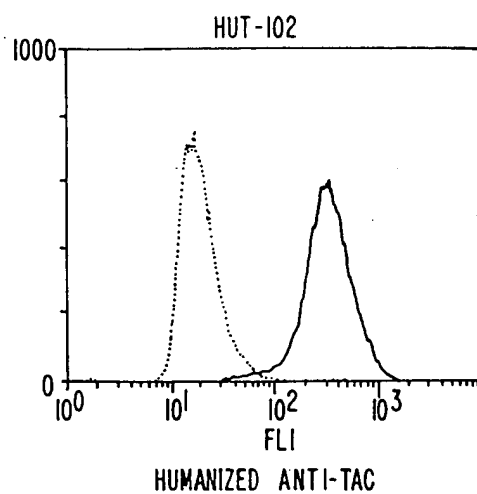


FIGURE 7A

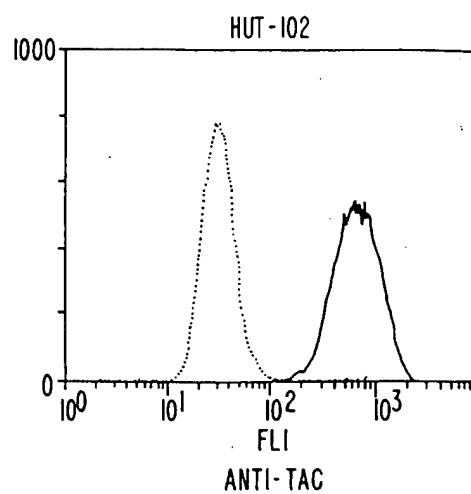


FIGURE 7B

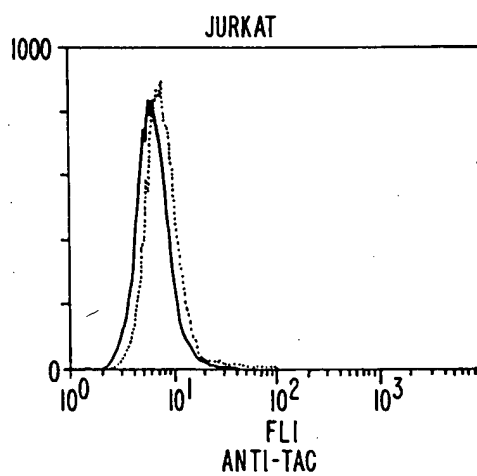


FIGURE 7C

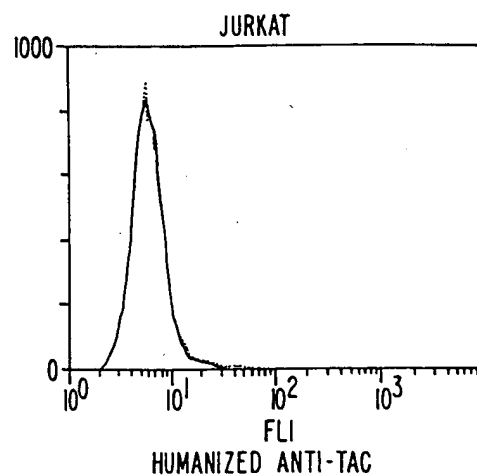


FIGURE 7D

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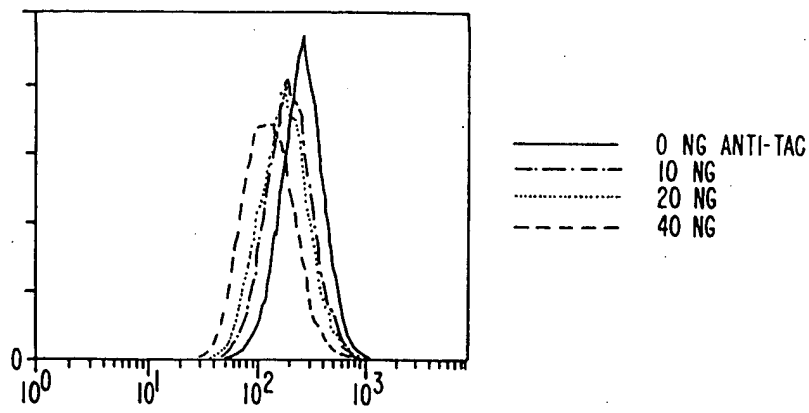


FIGURE 8A

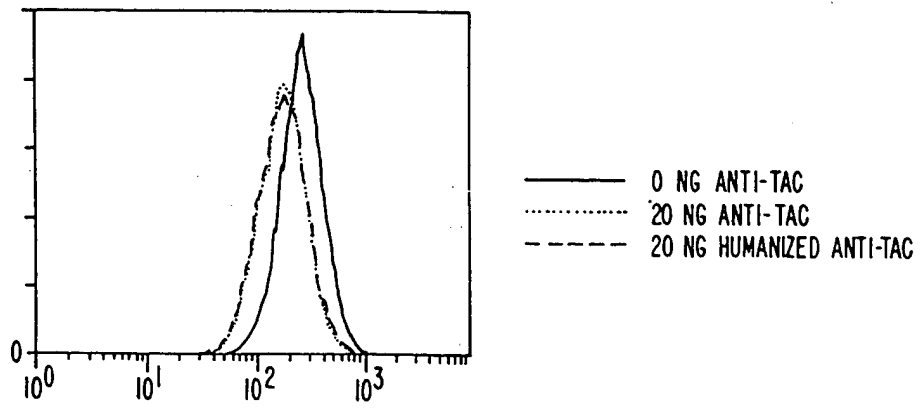


FIGURE 8B

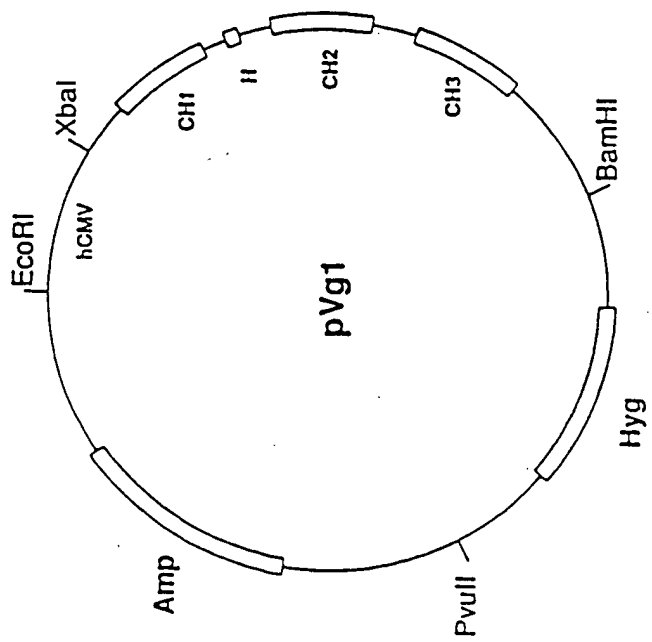


FIGURE 9A

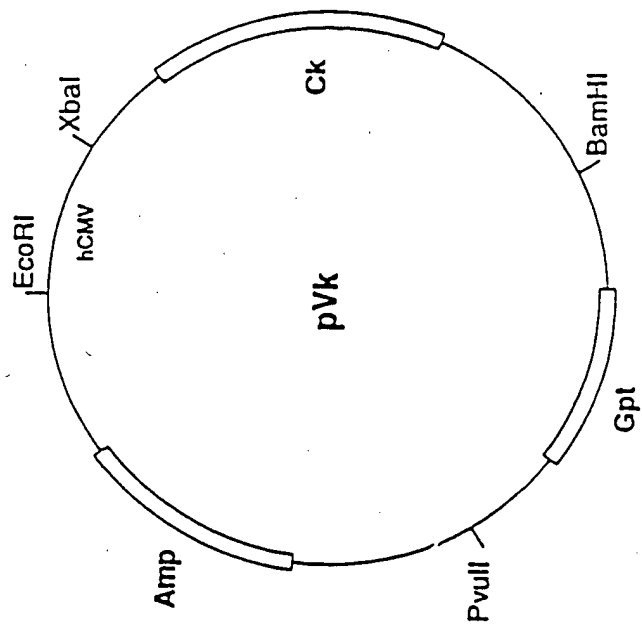


FIGURE 9B

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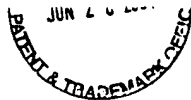
Q	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
Q	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
S	C	K	A	S	S	G	Y	T	F	T	S	Y	R	M	H	W	V	R	Q	A
S	C	K	A	S	S	G	Y	T	F	T	S	Y	R	M	H	W	V	R	Q	A
P	G	Q	G	L	E	W	I	G	Y	I	I	N	P	S	T	G	Y	T	E	Y
P	G	Q	G	L	E	W	I	G	Y	I	I	N	P	S	T	G	Y	T	E	Y
N	Q	K	F	K	D	K	A	T	I	I	T	A	D	E	S	T	N	T	A	Y
N	Q	K	F	K	D	K	A	T	I	I	T	A	D	E	S	T	N	T	A	Y
M	E	L	S	S	L	R	S	E	D	T	A	V	Y	Y	Y	C	A	R	G	G
M	E	L	S	S	L	R	S	E	D	T	A	V	Y	Y	Y	C	A	R	G	G
G	V	F	D	Y	W	G	Q	G	T	L	V	T	V	S	S	S	S	S	S	S
G	V	F	D	Y	E	Y	N	G	C	L	V	T	V	S	S	S	S	S	S	S

FIGURE 10A



D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
I	T	C	S	A	S	S	I	S	T	Y	M	H	W	Y	Q	Q	K	P	G
I	T	C	S	A	S	S	I	S	T	Y	M	H	W	Y	Q	Q	K	P	G
K	A	P	K	L	L	I	Y	T	T	S	N	L	A	S	G	V	P	A	R
K	A	P	K	L	L	M	Y	T	T	S	N	L	A	S	G	V	P	S	R
F	S	G	S	G	S	G	T	E	T	L	T	T	I	S	S	L	Q	P	D
F	I	G	S	G	S	G	T	E	T	L	T	T	I	S	S	L	Q	P	D
D	F	A	T	Y	Y	C	H	Q	R	S	T	Y	P	L	T	F	G	Q	G
D	F	A	T	Y	Y	C	H	Q	R	S	T	Y	P	L	T	F	G	Q	G
T	K	V	E	V	K														
T	K	V	E	V	K														

FIGURE 10B



10 20 30 40 50 60 70
AGCTTCTAGA TGGGATGGAG CTGGATCTTT CTCTTCTCC TGTCAAGGTAC CGGGGGGCTG CAGTCTCAGG
TCGAAGATCT ACCCTACCTC GACCTAGAAA GAGAAGGAGG ACAGTCCATG CGCCCGGCAC GTGAGAGTCC

80 90 100 110 120 130 140
TCCAGCTTGT CCAGTCTGGG GGTGAAGTCA AGAAACCTGG CTCGAGCGTG AAGGTCTCCT GCAAGGCTTC
AGGTCGAACA GGTCAACCC CGACTTCAGT TCTTTGGACC GAGCTCGCAC TTCCAGAGGA CATTCCGAAG

150 160 170 180 190 200 210
TGGCGGACCC TTTTCTAGCT ACAGGATGCA CTGGGTAAGG CAGGCCCTG GACAGGCTCT GGAATGGATG
ACCGCCCTGG AAAGATCGA TGTCTAGCT GACCCATTCC GTCCGGGAG CTGTCCGAGA CATTACCTAC

220 230 240 250 260 270 280
GGATATATTA ATCCCTCGAC TGGGTATCT GAATACAATC AGAAGTTCAA GGACAGGGTC ACAATTACTG
CCATATATAT TAGCAGCTG ACCCATATGA CTTATGTTAG TCTTCAAGTT CCTGTCCCAG TGTTAATGAC

290 300 310 320 330 340 350
CAGACGAATC CACCAATACA CCTACATGG AACTGAGGAG CCTGAGATCT GAGACACCG CATTCTAATT
GTCTGCTTAG GTGGTTATGT CGGATGTACC TTGACTCGTC GGAATCTAGA CTCTGTGGC GTAGATAAA

360 370 380 390 400 410 420
CTGTCCAGGG CGTGGGGGAG TCTTTGACTA CGAATACAAT GGAGGCGTGG TCACAGTCTC CTCAGGTGAG
GACAGTCCC CCACCCCTC AGAACTGAT GCTTATGTTA CCTCCGACC AGTGTACAG GATCCACTC

430 440
TCCTTAAAC CTCTAGACGA TAT
AGGAATTTG GACATCTGCT ATA

FIGURE 11A

10	20	30	40	50	60	70
CAAATCTAGA	TGGAGACCGA	TACCCTCCTG	CTATGGGTCC	TCCTGCTATG	GGTCCCAGGA	TCAACCGGAG
GTTTAGAICT	ACCTCTGGCT	ATGGGAGGAC	GATACCCAGG	AGGACGATAC	CCAGGGTCCT	AGTTGGCCTC
80	90	100	110	120	130	140
ATATTGAGAT	GACCCAGTCT	CCATCTACCC	TCTCTGCTAG	CGTCGGGGAT	AGGTCACCA	TAACTGCTC
TATAAGTCTA	CTGGGTCAGA	GCTAGATGGG	AGAGACGATC	GCAGCCCCCTA	TCCCAGTGGT	ATTGGACGAG
150	160	170	180	190	200	210
TGCCAGCTCA	AGTATAAGTT	ACATGCACTG	GTACCAGCAG	AAGCCAGGCA	AAGCTCCCAA	GCTTCTAATG
ACGGTCGAGT	TCATATTCAA	TGTACGTGAC	CATGGTCGTC	TTCGGTCCGT	TTCGAGGGTT	CGAAGATTAC
220	230	240	250	260	270	280
TATACCATAT	CCAACTGGC	TTCTGGAGTC	CCTTCTCGCT	TCATTGGCAG	TGGATCTGGG	ACCGAGTTCA
ATAATGGTGA	GTTTGGACCG	AAGACCTCAG	GGAAGAGCGA	AGTAACCGTC	ACCTAGACCC	TGGCTCAAAT
290	300	310	320	330	340	350
CCCTCACAAAT	CAGCTCTCTG	CAGCCAGATG	ATTTCGCCAC	TTATTACTGC	CATCAAAGGA	GTACTTACCC
GGGAGTGTTA	GTGAGAGAGC	GTCGGTCTAC	TAAAGCGGTG	AATAATGACG	GTAGTTTCCT	CATGAATGGG
360	370	380	390	400		
ACTCACGTTT	GGTCAGGGGA	CCAAGGTGGA	GGTCAAACGT	AAGTACACTT	TTCTAGATAT	A
TGAGTGCAAG	CCAGTCCCCT	GGTTCACCT	CCAGTTTGCA	TTCATGTGAA	AAGATCTATA	T

FIGURE 11B

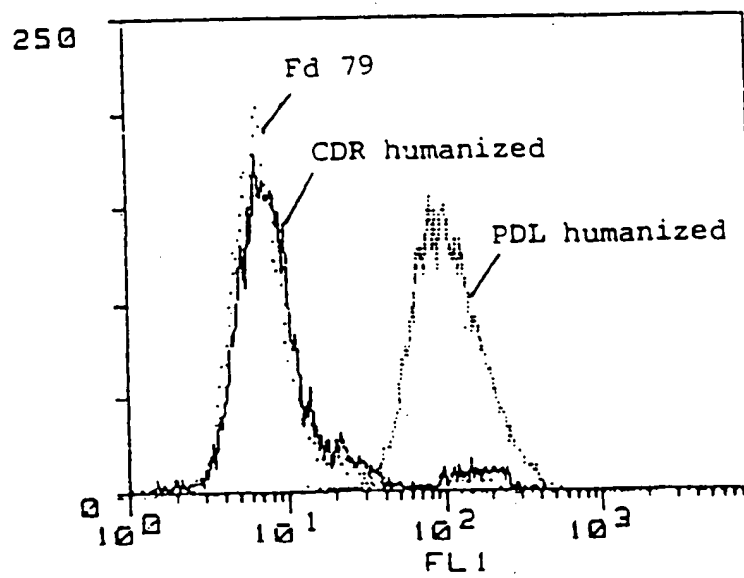


FIGURE 12

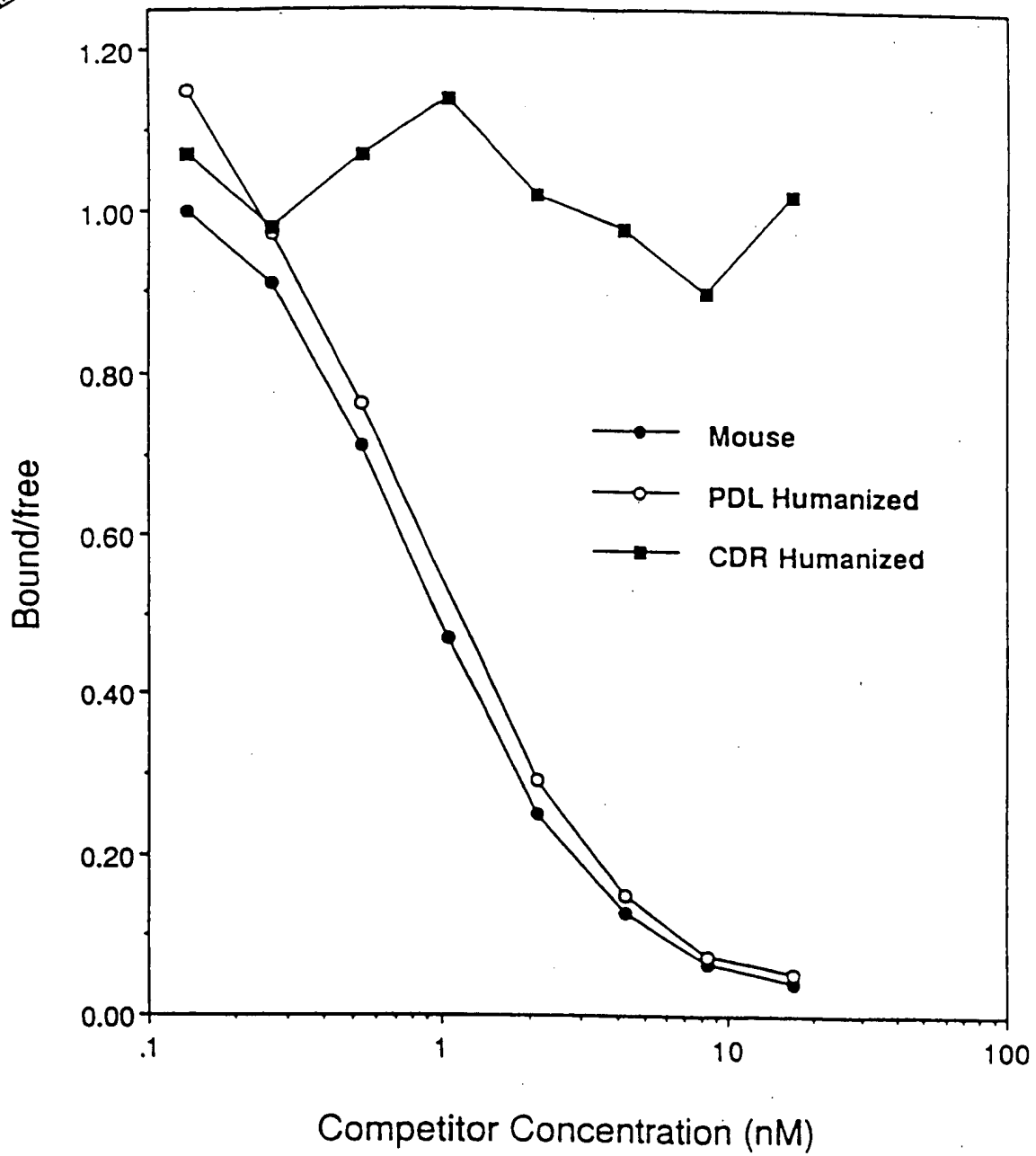


FIGURE 13

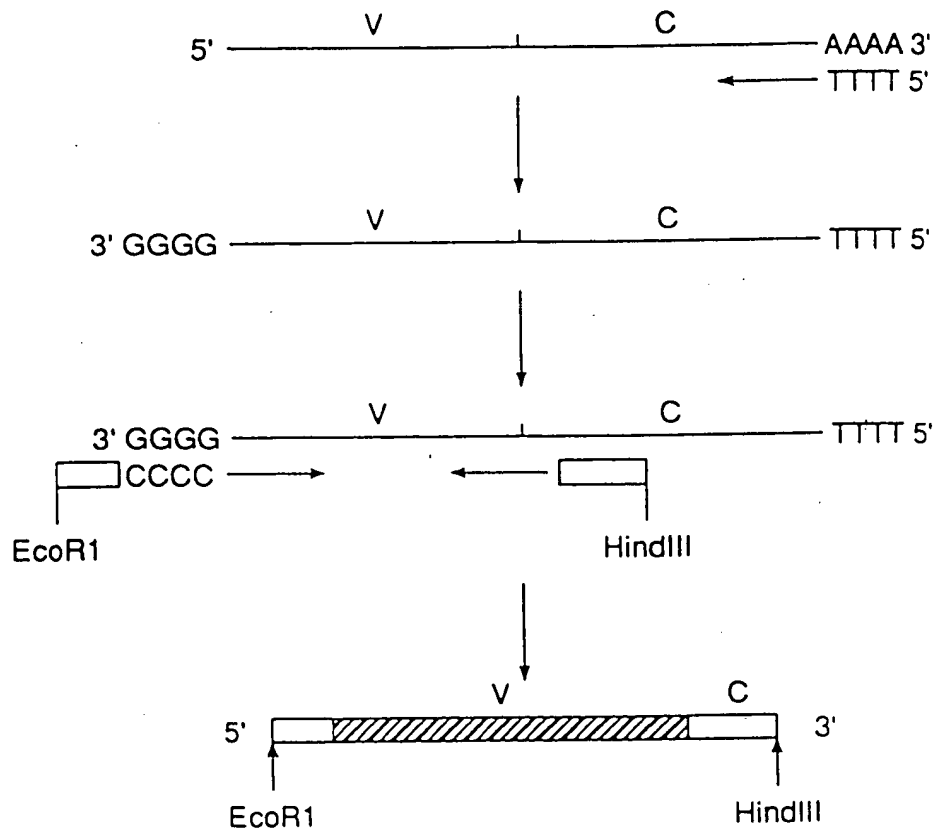


FIGURE 14

1	Q	V	Q	L	Q	S	G	A	E	L	A	K	P	G	A	S	V	K	M
1	Q	V	Q	L	Q	S	G	A	E	L	A	K	P	G	A	S	V	K	V
21	S	C	K	A	S	G	Y	T	F	T	S	Y	R	M	H	W	V	K	R
21	S	C	K	A	S	G	Y	T	F	T	S	Y	R	M	H	W	V	K	A
41	P	G	Q	G	L	E	W	I	G	Y	I	N	P	S	T	G	Y	T	Y
41	P	G	Q	G	L	E	W	I	G	Y	I	N	P	S	T	G	Y	T	Y
61	N	Q	K	F	K	D	K	A	T	L	T	A	D	K	S	S	S	T	Y
61	A	Q	K	F	K	D	K	A	T	L	T	A	D	K	S	S	S	T	Y
81	M	Q	L	S	S	L	T	F	E	D	S	A	V	Y	Y	C	A	R	G
81	M	Q	L	S	S	L	T	F	E	D	S	A	V	Y	Y	C	A	R	G
100	G	G	V	F	D	Y	W	G	Q	G	T	T	L	T	T	V	S	S	S
101	G	G	V	F	D	Y	W	G	Q	G	T	T	L	T	T	V	S	S	S

FIGURE 15

1	Q	I	V	L	T	Q	S	P	A	I	M	S	A	S	P	G	E	K	V	T
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	I	T
21	I	T	C	S	A	S	S	S	I		S	Y	M	H	W	F	Q	Q	K	P
21	I	T	C	R	A	S	Q	S	I	N	T	W	L	A	W	Y	Q	Q	I	P
40	G	T	S	P	K	L	W	I	Y	T	T	S	N	L	A	S	G	V	P	A
41	G	K	A	P	R	L	L	M	Y	K	A	S	S	L	E	S	G	I	P	S
60	R	F	S	G	S	G	S	G	T	S	Y	S	L	T	I	S	R	M	E	A
61	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P
80	E	D	A	A	T	Y	Y	C	H	Q	R	S	T	Y	P	L	T	F	G	S
81	D	D	F	A	T	Y	Y	C	Q	Q	Y	N	S	D	S	K	M	F	I	Q
100	G	T	K	L	E	L	K													
101	G	I	T	K	V	E	K													

FIGURE 16

10 20 30 40 50 60
TCTAGATGGGATGGAGCTGGATCTTTCTCTTCCTCCTGTCAGGTACCGCGGGCGGTGCACT
M G W S W I F L F L L S G T A G V H

70 80 90 100 110 120
CTCAGGTCCAGCTTGTCCAGTCTGGGGCTGAAGTCAAGAAACCTGGCTCGAGCGTGAAGG
S Q V Q L V Q S G A E V K K P G S S V K

130 140 150 160 170 180
TCTCCTGCAAGGCTTCTGGCTACACCTTTACTAGCTACAGGATGCACTGGGTAAAGGCAGG
V S C K A S G Y T F T S Y R M H W V R Q

190 200 210 220 230 240
CCCCTGGACAGGGTCTGGAATGGATTGGATATATTAATCCGTCCACTGGGTATACTGAAT
A P G Q G L E W I G Y I N P S T G Y T E

250 260 270 280 290 300
ACAATCAGAAGTTCAAGGACAAGGCAACAATTACTGCAGACGAATCCACCAATACAGCCT
Y N Q K F K D K A T I T A D E S T N T A

310 320 330 340 350 360
ACATGGAAGTGAAGCAGCCTGAGATCTGAGGACACCGCAGTCTATTACTGTGCAAGAGGGG
Y M E L S S L R S E D T A V Y Y C A R G

370 380 390 400 410 420
GGGGGGTCTTTGACTACTGGGGCCAAGGAACCCTGGTCACAGTCTCCTCAGGTGAGTCCT
G G V F D Y W G Q G T L V T V S S

430
TAAACCTCTAGA

FIGURE 17

10 20 30 40 50 60
TCTAGATGGAGACCGATACCCCTCCTGCTATGGGTCCCTGCTATGGGTCCCAGGATCAA
M E T D T L L L W V L L L W V P G S

70 80 90 100 110 120
CCGGAGATATTCAGATGACCCAGTCTCCATCTACCCTCTCTGCTAGCGTCGGGGATAGGG
T G D I Q M T Q S P S T L S A S V G D R

130 140 150 160 170 180
TCACCATAACCTGCTCTGCCAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGC
V T I T C S A S S S I S Y M H W Y Q Q K

190 200 210 220 230 240
CAGGCAAAGCTCCCAAGCTTCTAATTTATACCACATCCAACCTGGCTTCTGGAGTCCCTG
P G K A P K L L I Y T T S N L A S G V P

250 260 270 280 290 300
CTCGCTTCAGTGGCAGTGGATCTGGGACCGAGTTCACCCCTCACAATCAGCTCTCTGCAGC
A R F S G S G S G T E F T L T I S S L Q

310 320 330 340 350 360
CAGATGATTTGCCCACTTATTACTGCCATCAAAGGAGTACTTACCCACTCACGTTCCGGTC
P D D F A T Y Y C H Q R S T Y P L T F G

370 380 390 400
AGGGGACCAAGGTGGAGGTCAAACGTAAGTACACTTTTCTAGA
Q G T K V E V K

FIGURE 18

HES12 AGCTTCTAGATGGGATGGAGCTGGATCTTTTCTCTTCTCTCTCTGTCAGGTACCGCGGGCGGTG
CACTCTCAGGTCAGGCTTGTCCAGTCTGGGGCTGAAGTCAAGAAACCTGGCTCGAGCGGTG
AAGGTC

HES13 CCGAGTCGACGGATTAAATATATCCAATCCATTCCAGACCCCTGTCCAGGGGCCCTGCCCTTAC
CCAGTGCAATCCTGTAGCTAGTAAGGTGTAGCCAGAGCCCTTGCAGGAGACCCTTCACGGCT
CGAGCCAGG

HES14 TATATTAAATCCGTCGACTGGGTATACCTGAATACAAATCAGAAGTTCAAGGACAAGGGCAACA
ATTACTGCAGACGGAATCCACCAATACAGCCCTAGATGGAACCTGAGCAGCCTGAGATCTGAG
GACA

HES15 ATATCGTCTAGAGGTTTTAAAGGACTCACCTGAGGAGACTGTGACCAAGGTTTCCTTGGCCG
CAGTAGTCAAGACCCCGCCCTCTTGCACAGTAATAGACTGGGGTGTCTCCTCAGATCTC
AGGCTGCT

FIGURE 19A

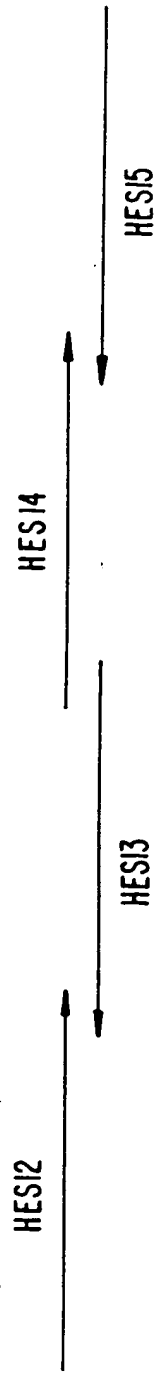


FIGURE 19B

JFD1 CAAATCTAGATGGAGACCGATACCCCTCCTGCTATGCGTCCCTGCTATGCGGTCCGAGGA
TCAACCGGAGATATTCAGATGACCCAGTCTCCATCTACCCCTCTCTGCTAGCGTGGGGGAT

JFD2 ATAAATTAGAAAGCTTGGGAGCTTTGCCCTGGCTTCTGCTGGTACCAGTGCATGTAACTTAT
ACTTGAGCTGGCAGAGCAGGTTATGGTGACCCCTATCCCGACGCTAGCAGAGAG

JFD3 GCTCCGAAGCTTCTAATTTATACCACATCCAACCTGGCTTCTGGAGTCCCTGCTGGCTTC
AGTGGCAGTGGATCTGGGACCGAGTTCACCCCTCACAAATCAGCTCTCTGCAGCCAGATGAT
TTC

JFD4 TATATCTAGAAAAGTGTACTTACGTTTGACCTCCACCTTGGTCCCCTGACCGAACGTGAG
TGGGTAAGTACTCCTTTGATGGCAGTAATAAGTGGCGAAATCATCTGCGCTGCAGAGAGCT
GA

FIGURE 20A

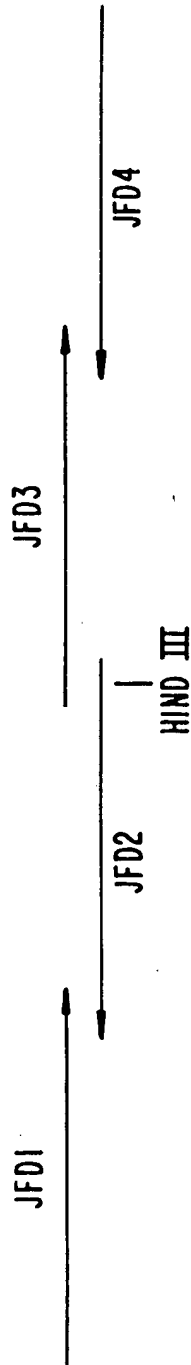


FIGURE 20B

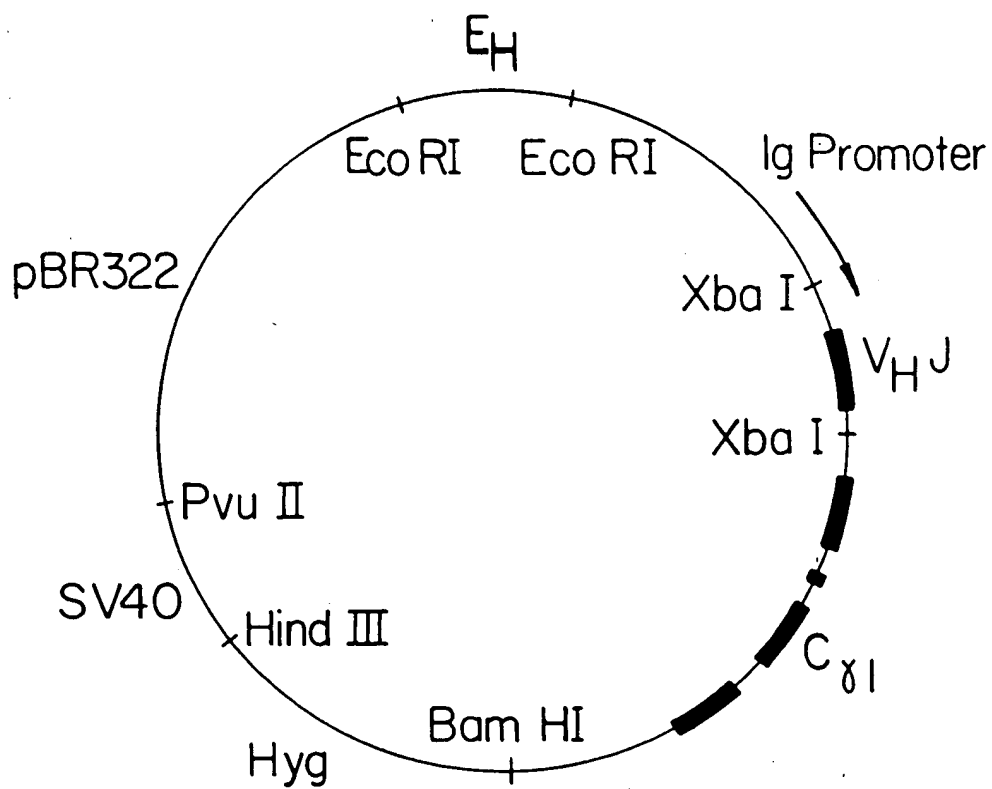


FIGURE 21

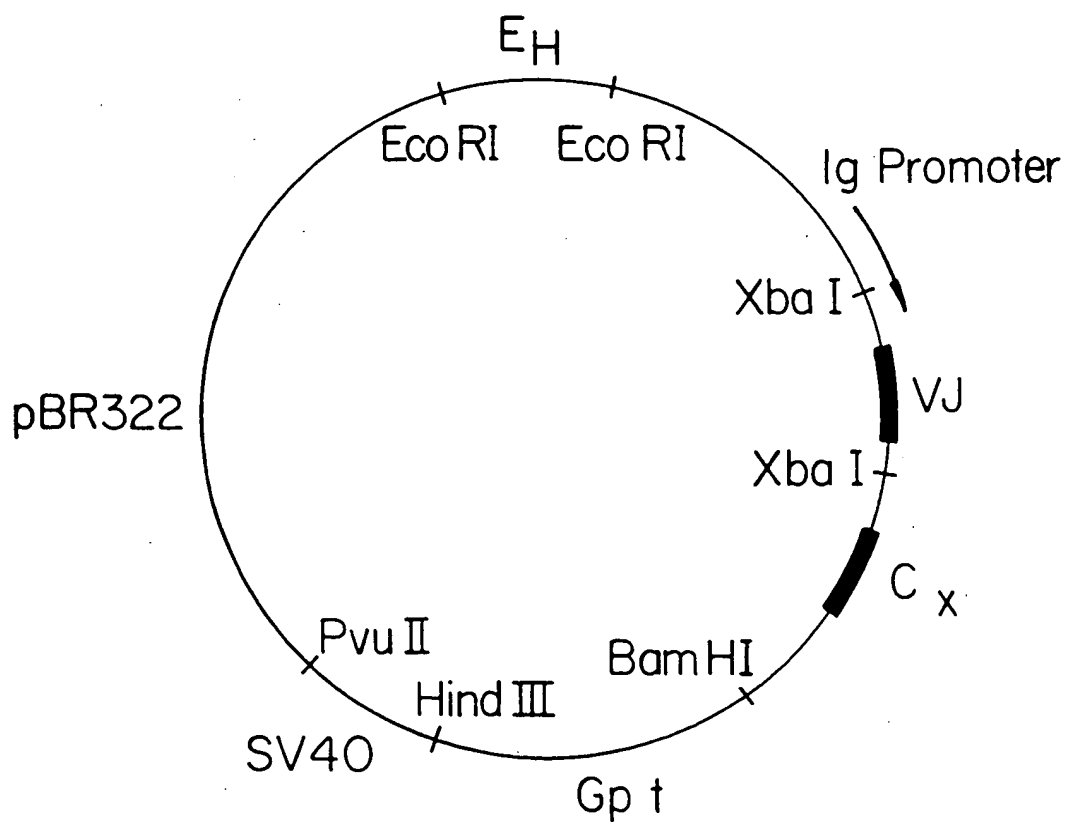


FIGURE 22

30 60
ATGGATTTTCAAGTGCAGATTTTCAGCTTCCTGCTAATCAGTGCCTCAGTCATACTGTCC
M D F Q V Q I F S F L L I S A S V I L S

90 120
AGAGGACAAATTGTTCTCACCCAGTCTCCAGCAATCATGTCTGCGTCTCCAGGGGCGAAG
R G Q I V L T Q S P A I M S A S P G E K

150 180
GTCACCATGACCTGCAGTGGCAGCTCAAGTGTAAGTTTTCATGTACTGGTACCAGCAGAGG
V T M T C S G S S S V S F M Y W Y Q Q R

210 240
CCAGGATCCTCCCCCAGACTCCTGATTTATGACACATCCAACCTGGCTTCTGGAGTCCCT
P G S S P R L L I Y D T S N L A S G V P

270 300
GTTGCTTCAGTGGCAGTGGGTCTGGGACCTCTTACTCTCTCACAATCAGCCGAATGGAG
V R F S G S G S G T S Y S L T I S R M E

330 360
GCTGAAGATGCTGCCACTTATTACTGCCAGCAGTGGAGTACTTACCCGCTCACGTTCCGT
A E D A A T Y Y C Q Q W S T Y P L T F G

GCTGGGACCAAGCTGGAGCTGAAA
A G T K L E L K

FIGURE 23A

30 60
ATGGCTGTCTTGGGGCTGCTCTTCTGCCTGGTGACATTCCCAAGCTGTGTCTATCCCAG
M A V L G L L F C L V T F P S C V L S Q

90 120
GTGCAGCTGAAGCAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTCCATCACC
V Q L K Q S G P G L V Q P S Q S L S I T

150 180
TGCACAGTCTCTGGTTTCTCAGTAACAAGTTATGGTGTACACTGGATTGCGCCAGTCTCCA
C T V S G F S V T S Y G V H W I R Q S P

210 240
GGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGAAGCACAGACTATAATGCA
G K G L E W L G V I W S G G S T D Y N A

270 300
GCTTTCATATCCAGACTGACCATCAGCAAGGACAACTCCAAGAGCCAAGTTTCTTTAAA
A F I S R L T I S K D N S K S Q V F F K

330 360
GTGAACAGTCTGCAACCTGCTGACACAGCCATATACTATTGTGCCAGAGCTGGGGACTAT
V N S L Q P A D T A I Y Y C A R A G D Y

390
AATTACGACGGTTTTGCTTACTGGGGCCAAGGGACTCTGGTCACTGTCTCTGCG
N Y D G F A Y W G Q G T L V T V S A

FIGURE 23B

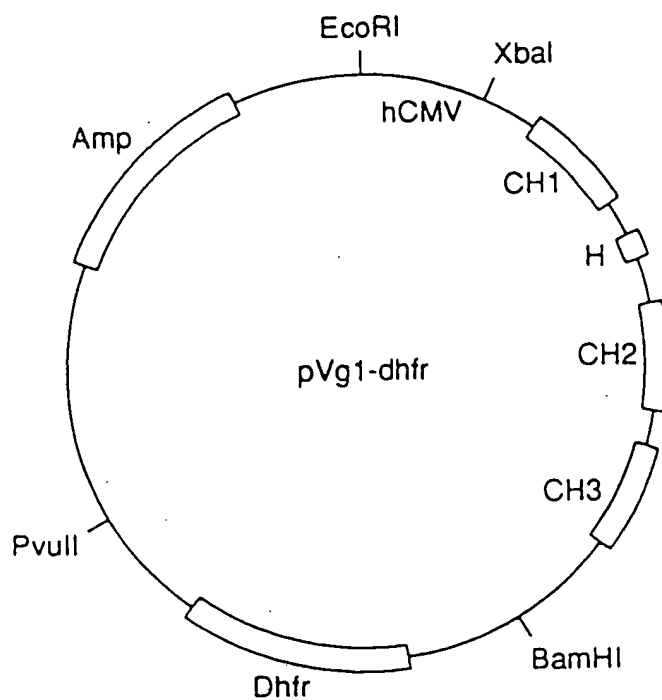


FIGURE 24A

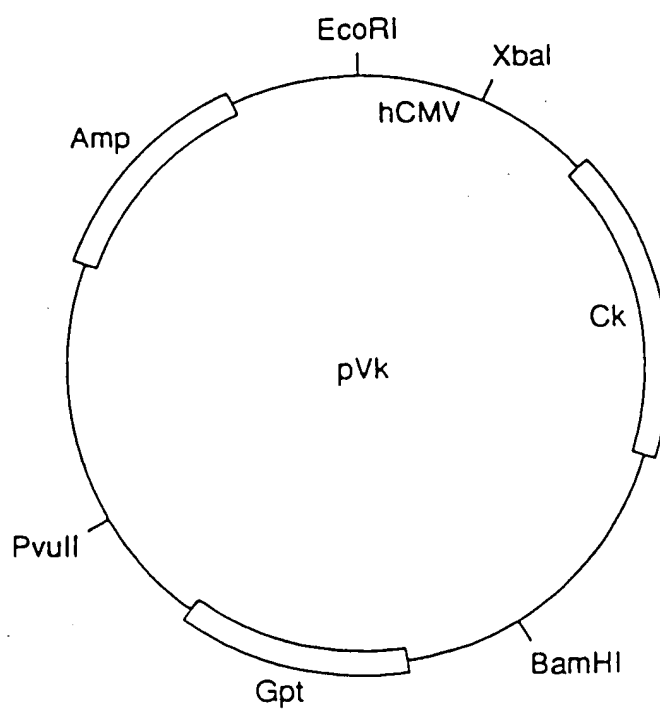


FIGURE 24B

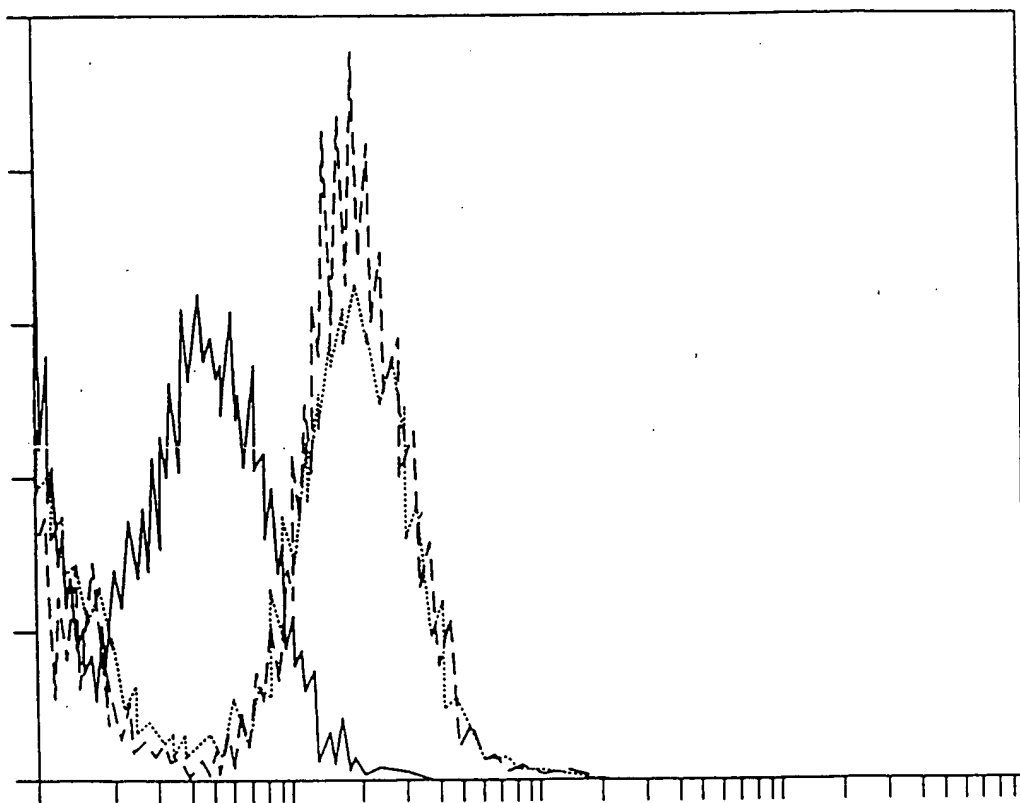


FIGURE 25

1	D	I	Q	M	T	Q	S	P	S	S	L	S	V	S	V	G	D	R	V	T
1	D	I	Q	M	T	Q	S	P	S	S	L	S	<u>A</u>	S	V	G	D	R	V	T
21	I	T	C	Q	A	S	Q	N	V	N	A	Y	L	N	W	Y	Q	Q	K	P
21	I	T	C	<u>S</u>	<u>G</u>	<u>S</u>	<u>S</u>	<u>S</u>	<u>V</u>		<u>S</u>	<u>F</u>	<u>M</u>	<u>Y</u>	<u>W</u>	<u>Y</u>	<u>Q</u>	<u>Q</u>	<u>K</u>	<u>P</u>
41	G	L	A	P	K	L	L	I	Y	G	A	S	T	R	E	A	G	V	P	S
40	G	<u>K</u>	A	P	K	L	L	I	Y	<u>D</u>	<u>T</u>	<u>S</u>	<u>N</u>	<u>L</u>	<u>A</u>	<u>S</u>	G	V	P	S
61	R	F	S	G	S	G	S	G	T	D	F	T	F	T	I	S	S	L	Q	P
60	R	F	S	G	S	G	S	G	T	D	<u>Y</u>	T	F	T	I	S	S	L	Q	P
81	E	D	I	A	T	Y	Y	C	Q	Q	Y	N	N	W	P	P	T	F	G	Q
80	E	D	I	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>W</u>	<u>S</u>	<u>T</u>	<u>Y</u>	<u>P</u>	<u>L</u>	<u>T</u>	<u>F</u>	<u>G</u>	<u>Q</u>
101	G	T	K	V	E	V	K													
100	G	T	K	V	E	V	K													

FIGURE 26A

1	A	V	Q	L	L	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	L
1	<u>E</u>	V	Q	L	L	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	L
21	S	C	A	A	S	G	F	T	F	S	A	S	A	M	S	W	V	R	Q	A
21	S	C	A	A	S	G	F	T	<u>V</u>	<u>T</u>	<u>S</u>	<u>Y</u>	<u>G</u>	<u>V</u>	<u>H</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	G	K	G	L	E	W	V	A	W	K	Y	E	N	G	N	D	K	H	Y
41	P	G	K	G	L	E	W	V	<u>G</u>		<u>V</u>	<u>I</u>	<u>W</u>	<u>S</u>	<u>G</u>	<u>G</u>	<u>S</u>	<u>T</u>	<u>D</u>	<u>Y</u>
61	A	D	S	V	N	G	R	F	T	I	S	R	N	D	S	K	N	T	L	Y
60	<u>N</u>	<u>A</u>	<u>A</u>	<u>F</u>	<u>I</u>	<u>S</u>	R	F	T	I	S	R	<u>D</u>	<u>N</u>	S	K	N	T	L	Y
81	L	Q	M	N	G	L	Q	A	Z	V	S	A	I	Y	Y	C	A	R	D	A
80	L	Q	M	N	<u>S</u>	L	Q	A	E	<u>D</u>	<u>T</u>	A	I	Y	Y	C	A	R	<u>A</u>	
101	G	P	Y	V	S	P	T	F	F	A	H	W	G	Q	G	T	L	V	T	V
99	<u>G</u>	<u>D</u>	<u>Y</u>		<u>N</u>	<u>Y</u>	<u>D</u>	<u>G</u>	<u>F</u>	<u>A</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>
121	S	S																		
118	S	S																		

FIGURE 26B

vc13

```
      10      20      30      40      50      60
TTCTGCTGGT ACCAGTACAT GAAACTTACA CTTGAGCTGC CACTGCAGGT GATGGTGACG

      70      80      90     100
CGGTCACCCA CTGAGGCACT GAGGCTAGAT GGAGACTGGG TCATTTG
```

vc14

```
      10      20      30      40      50      60
CATGTACTGG TACCAGCAGA AGCCAGGAAA AGCTCCGAAA CTTCTGATTT ATGACACATC

      70      80      90     100     110     120
CAACCTGGCT TCTGGAGTCC CTTCCCGCTT CAGTGGCAGT GGGTCTGGGA CCGATTACAC

      130
CTTTACAATC TCTTCA
```

vc15

```
      10      20      30      40      50      60
TGTGTCTAGA AAAGTGTACT TACGTTTTAC CTCGACCTTG GTCCCTTGAC CGAACGTGAG

      70      80      90     100     110     120
CGGGTAAGTA CTCCACTGCT GGCAGTAATA AGTGGCTATA TCTTCCGGCT GAAGTGAAGA

      130
GATTGTAAAG GTGTAAT
```

vc16

```
      10      20      30      40      50      60
CACATCTAGA CCACCATGGA TTTTCAAGTG CAGATCTTCA GCTTCCTGCT AATCAGTGCC

      70      80      90     100
TCAGTCATAC TGTCCAGAGG AGATATTCAA ATGACCCAGT CTCCATCT
```

FIGURE 27A

vc11

10	20	30	40	50	60
TAGTCTGT	CGACCCACCT	CCATATCACT	CCCACCCACT	CGAGTCCCTT	TCCAGGAGCC
70	80	90	100	110	120
TGGCGGACCC	AGTGTACACC	ATAACTTGTT	ACGGTGAAAC	CACTGGCGGC	ACAAGACAGT
130					
CTCAGAGATC	CTCCTGGC				

vc12

10	20	30	40	50	60
TGGTGGGTCG	ACAGACTATA	ATGCAGCTTT	CATATCCAGA	TTTACCATCA	GCAGAGACAA
70	80	90	100	110	120
CAGCAAGAAC	ACACTGTATC	TCCAAATGAA	TAGCCTGCAA	GCCGAGGACA	CAGCCATATA
TTATTG					

wps54

10	20	30	40	50	60
ACACTCTAGA	CCACCATGGC	TGTCTTGGGG	CTGCTCTTCT	GCCTGGTGAC	ATTCCCAAGC
70	80	90	100	110	120
TGTGTCCCTAT	CCGCTGTCCA	GCTGCTAGAG	AGTGGTGGCG	GTCTGGTGCA	GCCAGGAGGA
130					
TCTCTGAGAC					

wps57

10	20	30	40	50	60
ACACTCTAGA	AGTTAGGACT	CACCTGAAGA	GACAGTGACC	AGAGTCCCTT	GGCCCCAGTA
70	80	90	100	110	
AGCAAAACCG	TCGTAATTAT	AGTCCCCAGC	TCTGGCACAA	TAATATATGG	CTGTGTCC

FIGURE 27B

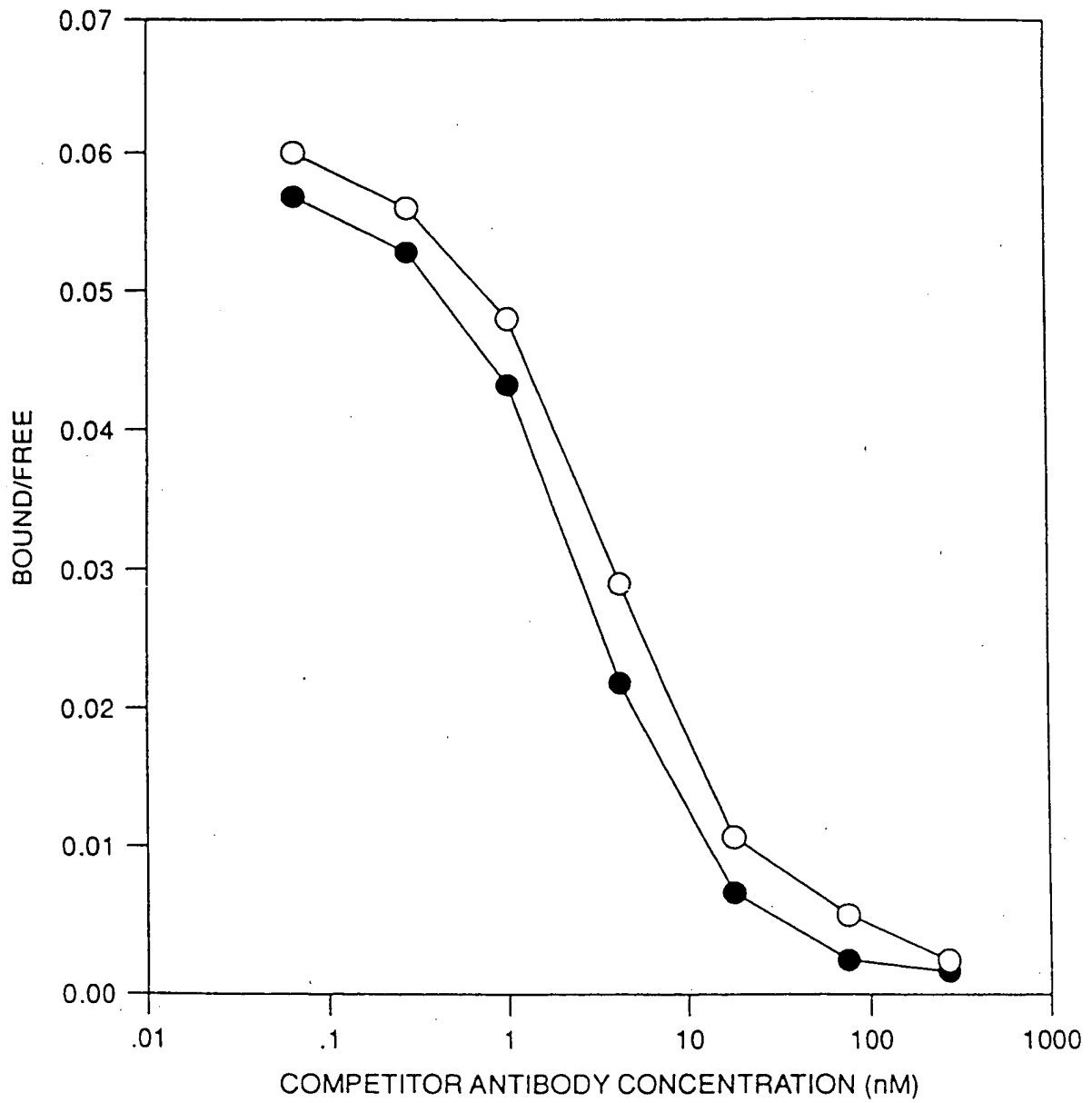


FIGURE 28

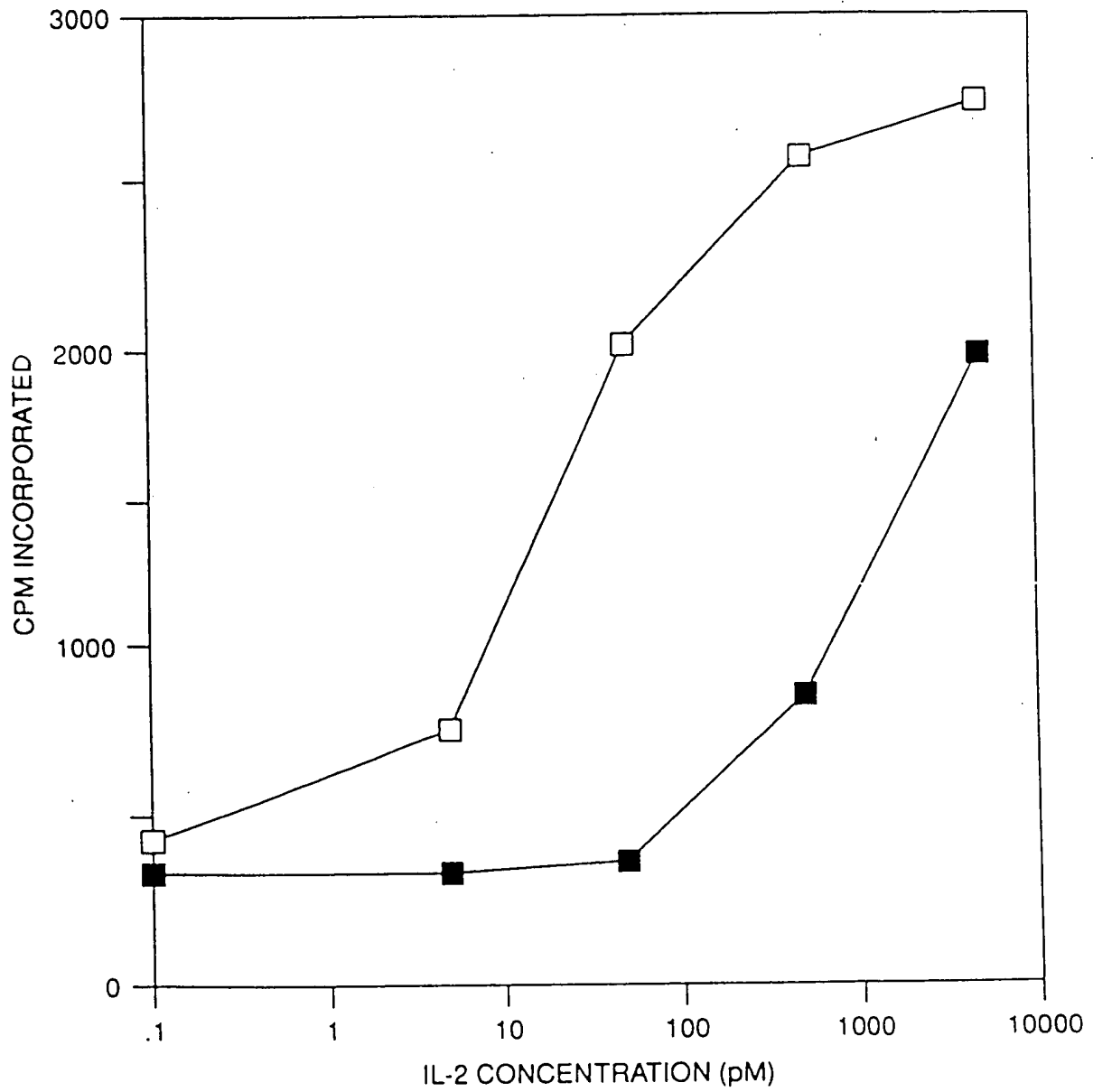


FIGURE 29



1 5 10 15 20
1 E M I L V E S G G G L V K P G A S L K L
1 E V Q L L E S G G G L V Q P G G S L R L
25 30 35 40
21 S C A A S G F T F S N Y G L S W V R Q T
21 S C A A S G F T F S N Y G L S W V R Q A
45 50 52 a 55
41 S D R R L E W V A S I S R G G G R I Y S
41 P G K G L E W V A S I S R G G G R I Y S
60 65 70 75
60 P D N L K G R F T I S R E D A K N T L Y
60 P D N L K G R F T I S R N D S K N T L Y
80 82 a b c 85 90 95
80 L Q M S S L K S E D T A L Y Y C L R E G
80 L Q M N S L Q A E D T A L Y Y C L R E G
100 a b c d k 105 110
97 I Y Y A D Y G F F D V W G T G T T V I V
97 I Y Y A D Y G F F D V W G Q G T L V T V
113
112 S S
112 S S

FIGURE 30A

1 5 10 15 20
1 D I V L T Q S P A S L A V S L G Q R A T
1 E I V M T Q S P A T L S V S P G E R A T
25 27 a b c d 30 35
21 I S C R A S Q S V S T S T Y N Y M H W Y
21 L S C R A S Q S V S T S T Y N Y M H W Y
40 45 50 55
37 Q Q K P G Q P P K L L I K Y A S N L E S
37 Q Q K P G Q S P R L L I K Y A S N L E S
60 65 70 75
57 G V P A R F S G S G F G T D F T L N I H
57 G I P A R F S G S G S G T E F T L T I S
80 85 90 95
77 P V E E E D T V T Y Y C Q H S W E I P Y
77 R L E S E D F A V Y Y C Q H S W E I P Y
100 105 107
97 T F G G G T K L E I K
97 T F G Q G T R V E I K

FIGURE 30B

[illegible]

	1	S	10	15	20
1	D	I	V	M	T Q S H K F M S T S V G D R V S
1	D	I	Q	M	T Q S P S T L S A S V G D R V T
		25	30	35	40
21	I	T	C	K A S Q D V G S A V V	W H Q Q K S
21	I	T	C	K A S Q D V G S A V V	W <u>H</u> Q Q K P
		45	50	55	60
41	G	Q	S P K L L I Y	W A S T R H T	G V P D
41	G	K	A P K L L <u>I</u> Y	W A S T R H T	G V P S
		65	70	75	80
61	R	F	T G S G S G T D F T L T I T N V Q S		
61	R	F	<u>T</u> G S G S G T E F T L T I S S L Q P		
		85	90	95	100
81	E	D	L A D Y F C	Q Q Y S I F P L T	F G A
81	D	D	F A T Y <u>F</u> C	Q Q Y S I F P L T	F G Q
		105	107		
101	G	T	R L E L K		
101	G	T	K V E V K		

PATENT & TRADEMARK

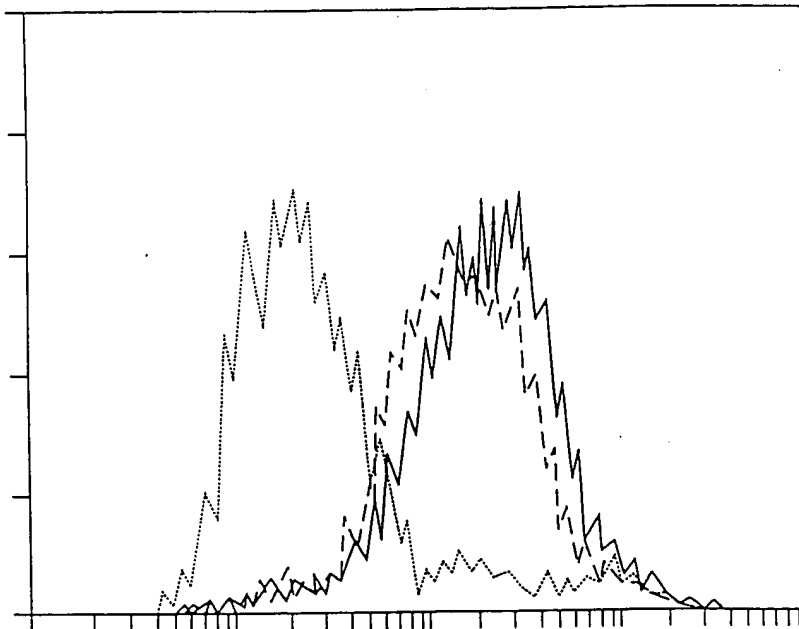


FIGURE 31A

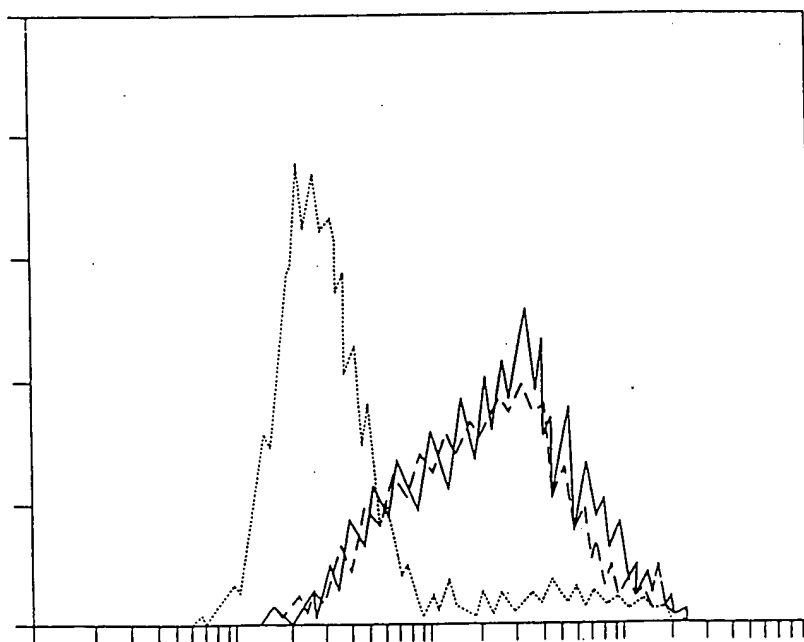


FIGURE 31B

JUN 28 2004
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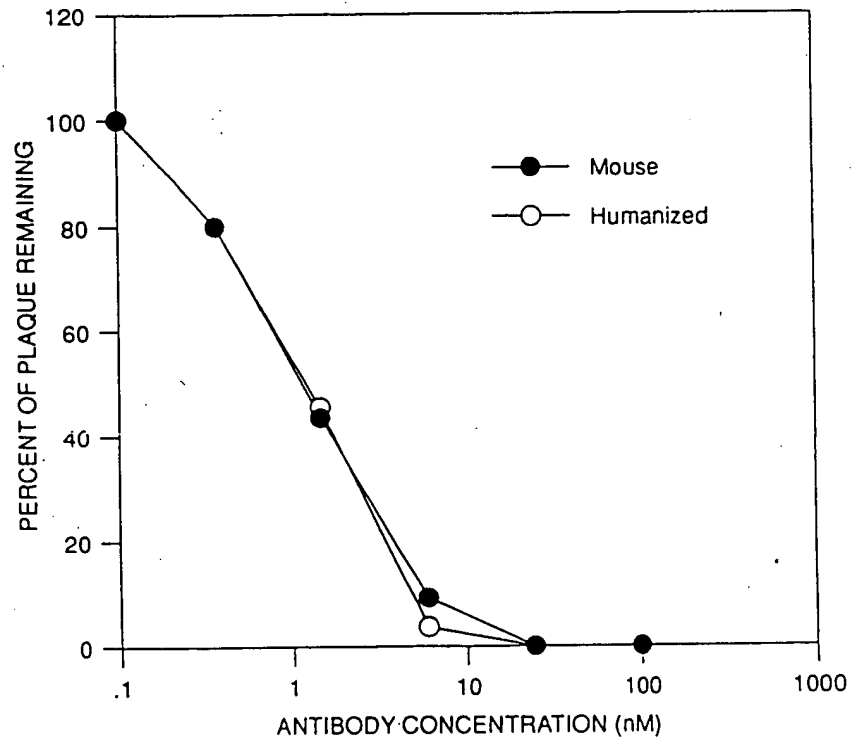


FIGURE 32A

JUN 28 1994
PATENT & TRADEMARK OFFICE

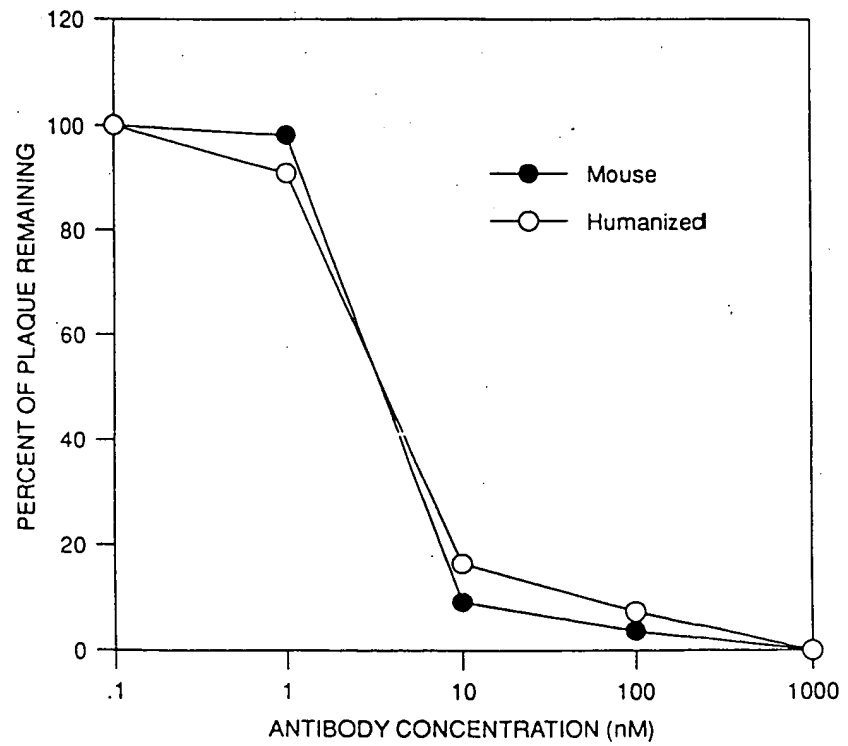


FIGURE 32B

BEST AVAILABLE COPY

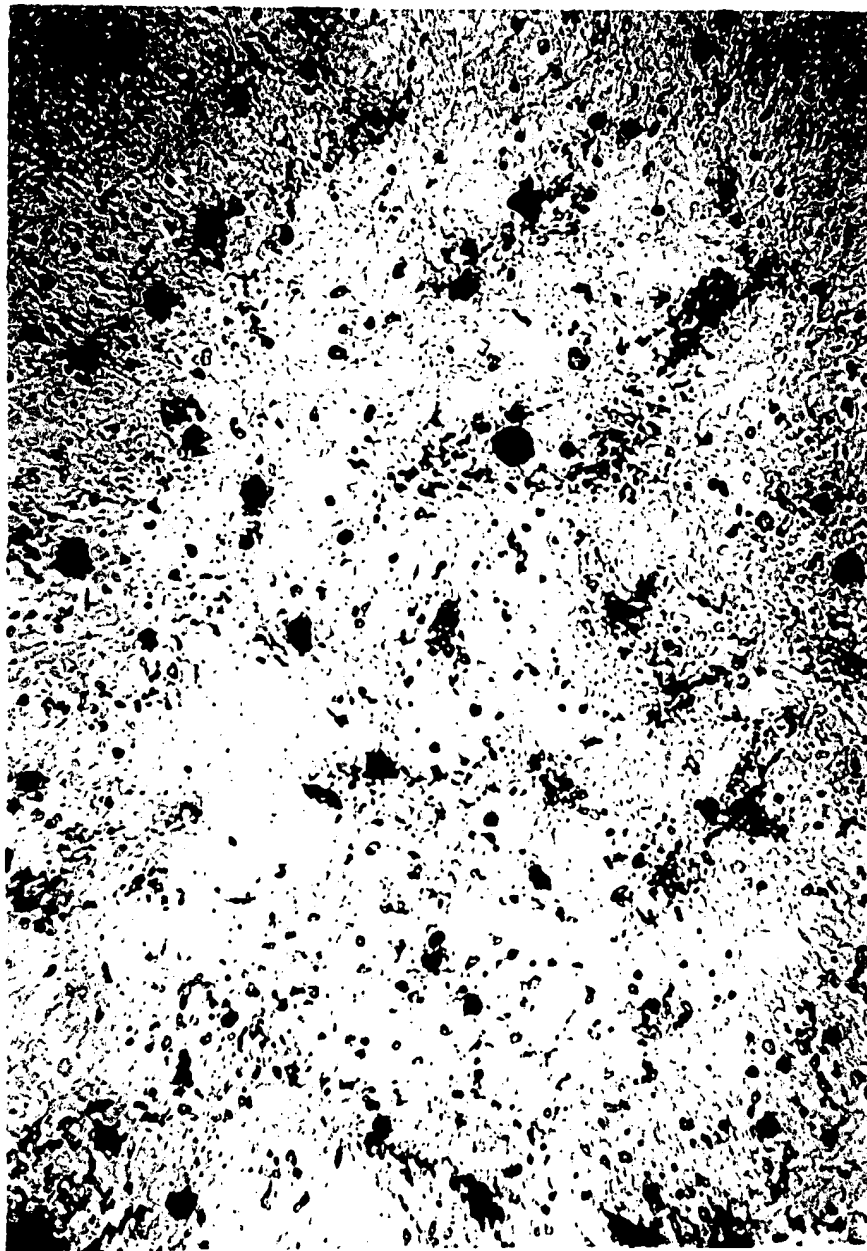


FIGURE 33A

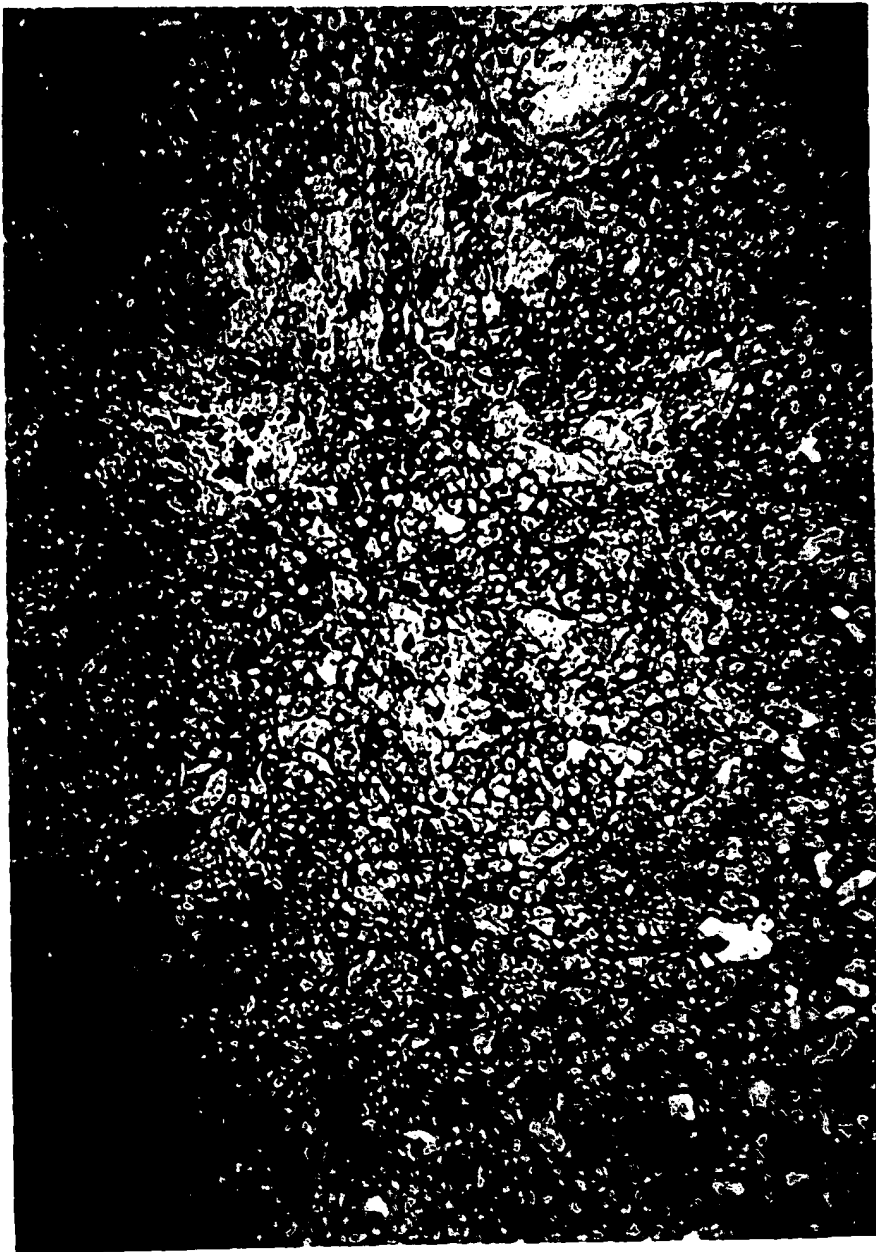
22783 U.S. PTO



062804

BEST AVAILABLE COPY

FIGURE 33B



REPLACEMENT SHEET

783 U.S. PTO



062804

30 60
ATGGAGAAAGACACACTCCTGCTATGGGTCCTGCTTCTCTGGGTTCCAGGTTCCACAGGT
M E K D T L L L W V L L L W V P G S T G

90 120
GACATTGTGCTGACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGGCAGAGGGCCACC
D I V L T Q S P A S L A V S L G Q R A T

150 180
ATCTCCTGCAGAGCCAGCGAAAGTGTGATAATTATGGCATTAGTTTTATGAACTGGTTC
I S C R A S E S V D N Y G I S F M N W F

210 240
CAACAGAAACCAGGACAGCCACCCAACTCCTCATCTATGCTGCATCCAACCAAGGATCC
Q Q K P G Q P P K L L I Y A A S N Q G S

270 300
GGGGTCCCTGCCAGGTTTAGTGGCAGTGGGTCTGGGACAGACTTCAGCCTCAACATCCAT
G V P A R F S G S G S G T D F S L N I H

330 360
CCTATGGAGGAGGATGATACTGCAATGTATTTCTGTCAGCAAAGTAAGGAGGTTCCGTGG
P M E E D D T A M Y F C Q Q S K E V P W

390
ACGTTCCGGTGGAGGCACCAAGCTGGAAATCAAA
T F G G G T K L E I K

FIGURE 34A

30 60
ATGGGATGGAGCTGGATCTTTCTCTTCTCCTGTCAGGAAGTGCAGGCGTCCACTCTGAG
M G W S W I F L F L L S G T A G V H S E

90 120
GTCCAGCTTCAGCAGTCAGGACCTGAGCTGGTGAAACCTGGGGCCTCAGTGAAGATATCC
V Q L Q Q S G P E L V K P G A S V K I S

150 180
TGCAAGGCTTCTGGATACACATTCACTGACTACAACATGCACTGGGTGAAGCAGAGCCAT
C K A S G Y T F T D Y N M H W V K Q S H

210 240
GGAAAGAGCCTTGAGTGGATTGGATATATTTATCCTTACAATGGTGGTACTGGCTACAAC
G K S L E W I G Y I Y P Y N G G T G Y N

270 300
CAGAAGTTCAAGAGCAAGGCCACATTGACTGTAGACAATTCCTCCAGCACAGCCTACATG
Q K F K S K A T L T V D N S S S T A Y M

330 360
GACGTCCGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGAGGGCGCCCC
D V R S L T S E D S A V Y Y C A R G R P

390
GCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA
A M D Y W G Q G T S V T V S S

FIGURE 34B

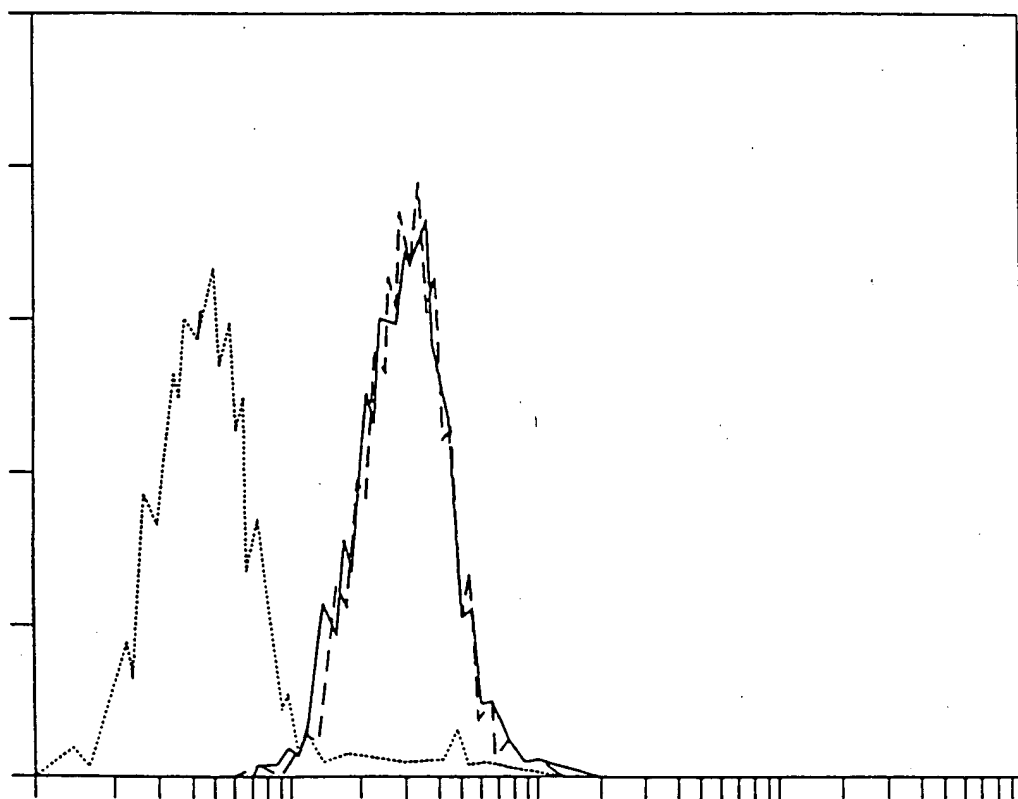


FIGURE 35

1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
1	D	I	Q	M	T	Q	S	P	S	<u>S</u>	L	S	A	S	V	G	D	R	V	T
21	I	T	C	R	A	S	Q	S		I	N				T	W	L	A	W	Y
21	I	T	C	R	A	S	E	S	V	D	N	Y	G	I	S	F	M	N	W	<u>F</u>
37	Q	Q	K	P	G	K	A	P	K	L	L	M	Y	K	A	S	S	L	E	S
41	Q	Q	K	P	G	K	A	P	K	L	L	<u>I</u>	Y	A	A	S	N	Q	G	S
57	G	V	P	S	R	F	I	G	S	G	S	G	T	E	F	T	L	T	I	S
61	G	V	P	S	R	F	<u>S</u>	G	S	G	S	G	T	<u>D</u>	F	T	L	T	I	S
77	S	L	Q	P	D	D	F	A	T	Y	Y	C	Q	Q	Y	N	S	D	S	K
81	S	L	Q	P	D	D	F	A	T	Y	Y	C	<u>Q</u>	<u>Q</u>	<u>S</u>	<u>K</u>	<u>E</u>	<u>V</u>	<u>P</u>	<u>W</u>
97	M	F	G	Q	G	T	K	V	E	V	K									
101	<u>T</u>	F	G	Q	G	T	K	V	E	<u>I</u>	K									

FIGURE 36A

1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	A	S	G	G	T	F	S	R	S	A	I	I	W	V	R	Q	A
21	S	C	K	A	S	G	<u>Y</u>	T	F	<u>T</u>	<u>D</u>	<u>Y</u>	<u>N</u>	<u>M</u>	<u>H</u>	W	V	R	Q	A
41	P	G	Q	G	L	E	W	M	G	G	I	V	P	M	F	G	P	P	N	Y
41	P	G	Q	G	L	E	W	<u>I</u>	G	<u>Y</u>	<u>I</u>	<u>Y</u>	<u>P</u>	<u>Y</u>	<u>N</u>	<u>G</u>	<u>G</u>	<u>T</u>	<u>G</u>	<u>Y</u>
61	A	Q	K	F	Q	G	R	V	T	I	T	A	D	E	S	T	N	T	A	Y
61	<u>N</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>S</u>	<u>K</u>	<u>A</u>	T	I	T	A	D	E	S	T	N	T	A	Y
81	M	E	L	S	S	L	R	S	E	D	T	A	F	Y	F	C	A	G	G	Y
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	<u>Y</u>	<u>Y</u>	<u>C</u>	<u>A</u>	<u>R</u>	<u>G</u>	
101	G	I	Y	S	P	E	E	Y	N	G	G	L	V	T	V	S	S			
100	<u>R</u>	<u>P</u>	<u>A</u>	<u>M</u>	<u>D</u>	<u>Y</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	<u>L</u>	<u>V</u>	<u>T</u>	<u>V</u>	<u>S</u>	<u>S</u>			

FIGURE 36BA

mal

```

      10      20      30      40      50      60
TATATCTAGA CCACCATGGG ATGGAGCTGG ATCTTTCTCT TCCTCCTGTC AGGAACTGCT

      70      80      90      100      110      120
GGCGTCCACT CTCAGGTTCA GCTGGTGCAG TCTGGAGCTG AGGTGAAGAA GCCTGGGAGC

      130
TCAGTGAAGG TT

```

ma2

```

      10      20      30      40      50      60
AGCCGGTACC ACCATTGTAA GGATAAATAT ATCCAATCCA TTCCAGGCCT TGGCCAGGAG

      70      80      90      100      110      120
CCTGCCTCAC CCAGTGCATG TTGTAGTCAG TGAAGGTGTA GCCAGAAGCT TTGCAGGAAA

      130
CCTTCACTGA GCT

```

ma3

```

      10      20      30      40      50      60
TGGTGGTACC GGCTACAACC AGAAGTTCAA GAGCAAGGCC ACAATTACAG CAGACGAGAG

      70      80      90      100      110
TACTAACACA GCCTACATGG AACTCTCCAG CCTGAGGTCT GAGGACACTG CA

```

ma4

```

      10      20      30      40      50      60
TATATCTAGA GGCCATTCTT ACCTGAAGAG ACAGTGACCA GAGTCCCTTG GCCCCAGTAG

      70      80      90      100      110
TCCATAGCGG GGCGCCCTCT TGCGCAGTAA TAGACTGCAG TGTCCTCAGA C

```

FIGURE 37A



ma5

```
      10      20      30      40      50      60
TATATCTAGA CCACCATGGA GAAAGACACA CTCCTGCTAT GGGTCCTGCT TCTCTGGGTT

      70      80      90     100     110     120
CCAGGTTCCA CAGGTGACAT TCAGATGACC CAGTCTCCGA GCTCTCTGTC CGCATCAGTA
```

GG

ma6

```
      10      20      30      40      50      60
TCAGAAGCTT AGGAGCCTTC CCGGGTTTCT GTTGGAACCA GTTCATAAAG CTAATGCCAT

      70      80      90     100     110     120
AATTGTCGAC ACTTTCGCTG GCTCTGCATG TGATGGTGAC CCTGTCTCCT ACTGATGCGG
```

AC

ma7

```
      10      20      30      40      50      60
TCCTAAGCTT CTGATTTACG CTGCATCCAA CCAAGGCTCC GGGGTACCCT CTCGCTTCTC

      70      80      90     100     110
AGGCAGTGGA TCTGGGACAG ACTTCACTCT CACCATTTC A TCTCTGCAGC CTGATGACT
```

ma8

```
      10      20      30      40      50      60
TATATCTAGA CTTTGGATTC TACTTACGTT TGATCTCCAC CTTGGTCCCT TGACCGAACG

      70      80      90     100     110
TCCACGGAAC CTCCTTACTT TGCTGACAGT AATAGGTTGC GAAGTCATCA GGCTGCAG
```

FIGURE 37B

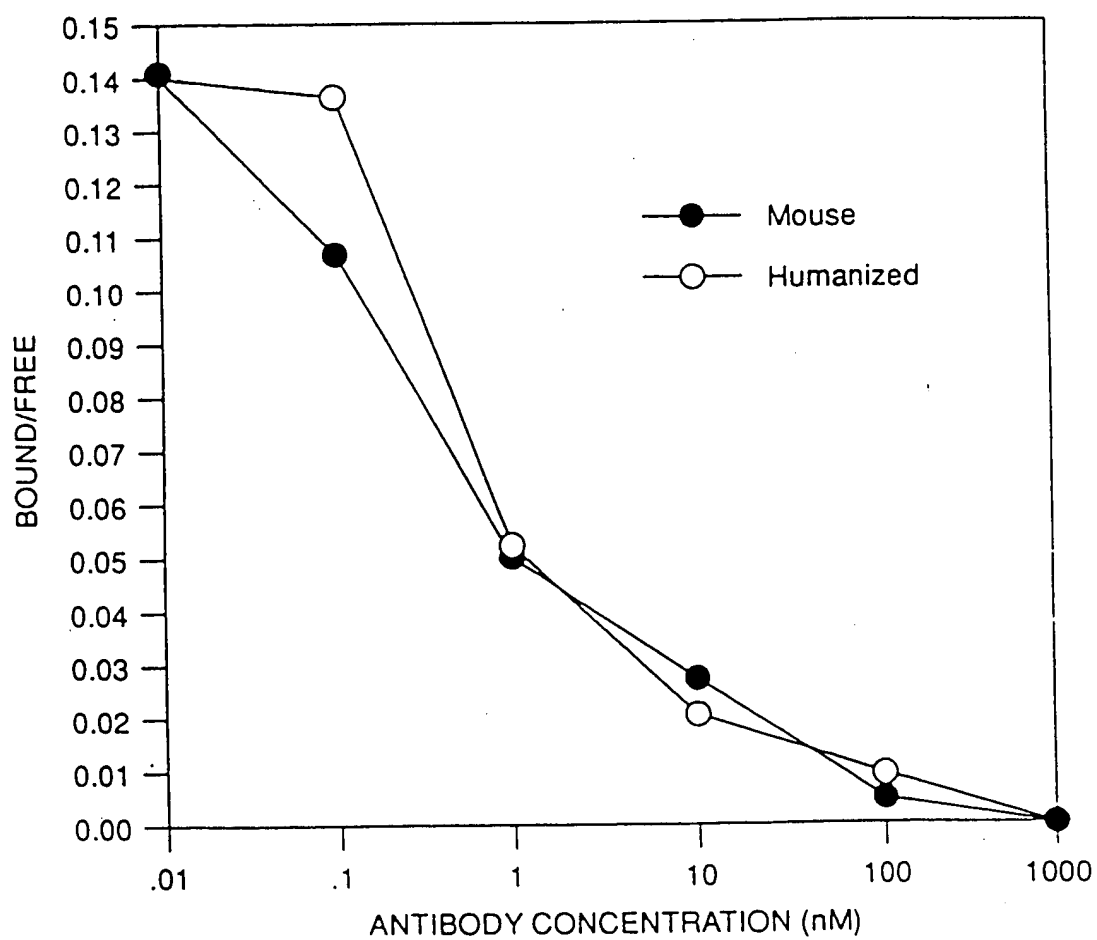


FIGURE 38

30 60
 ATGGTTTTTCACACCTCAGATACTTGGACTTATGCTTTTTTGGATTTCAGCCTCCAGAGGT
 M V F T P Q I L G L M L F W I S A S R G

90 120
 GATATTGTGCTAACTCAGTCTCCAGCCACCCTGTCTGTGACTCCGGGAGATAGCGTCAGT
 D I V L T Q S P A T L S V T P G D S V S

150 180
 CTTTCCTGCAGGGCCAGCCAAAGTATTAGCAACAACCTACACTGGTATCAACAAAAATCA
 L S C R A S Q S I S N N L H W Y Q Q K S

210 240
 CATGAGTCTCCAAGGCTTCTCATCAAGTATGCTTCCCAGTCCATCTCTGGGATCCCCTCC
 H E S P R L L I K Y A S Q S I S G I P S

270 300
 AGGTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCTCAGTGTCAACGGTGTGGAGACT
 R F S G S G S G T D F T L S V N G V E T

330 360
 GAAGATTTTGAATGTATTTCTGTCAACAGAGTAACAGTTGGCCTCATACGTTCCGGAGGG
 E D F G M Y F C Q Q S N S W P H T F G G

GGGACCAAGCTGGAAATAAAA
 G T K L E I K

FIGURE 39A

30 60
 ATGGGATGGAGCTGGATCTTTCTCTTCCTCCTGTCAGGAAGTGCAGGTGTCCACTCTGAG
 M G W S W I F L F L L S G T A G V H S E

90 120
 GTCCAGCTGCAACAGTCTGGACCTGAGCTGGTGAAGCCTGGAGCTTCAATGAAGATATCC
 V Q L Q Q S G P E L V K P G A S M K I S

150 180
 TGCAAGGCTTCTGTTTACTCATTCACTGGCTACACCATGAACTGGGTGAAGCAGAGCCAT
 C K A S V Y S F T G Y T M N W V K Q S H

210 240
 GGACAGAACCTTGAGTGGATTGGACTTATTAATCCTTACAATGGTGGTACTAGCTACAAC
 G Q N L E W I G L I N P Y N G G T S Y N

270 300
 CAGAAGTTCAAGGGGAAGGCCACATTAAGTGTAGACAAGTCATCCAACACAGCCTACATG
 Q K F K G K A T L T V D K S S N T A Y M

330 360
 GAGCTCCTCAGTCTGACATCTGCGGACTCTGCAGTCTATTACTGTACAAGACGGGGGTTT
 E L L S L T S A D S A V Y Y C T R R G F

390
 CGAGACTATTCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA
 R D Y S M D Y W G Q G T S V T V S S

FIGURE 39B

1	E	I	V	L	T	Q	S	P	G	T	L	S	L	S	P	G	E	R	A	T
1	E	I	V	L	T	Q	S	P	G	T	L	S	L	S	P	G	E	R	A	T
21	L	S	C	R	A	S	Q	S	V	S	S	G	Y	L	G	W	Y	Q	Q	K
21	L	S	C	<u>R</u>	<u>A</u>	<u>S</u>	<u>Q</u>	<u>S</u>		<u>I</u>	<u>S</u>	<u>N</u>	<u>N</u>	<u>L</u>	<u>H</u>	W	Y	Q	Q	K
41	P	G	Q	A	P	R	L	L	I	<u>Y</u>	G	A	S	S	R	A	T	G	I	P
40	P	G	Q	A	P	R	L	L	I	<u>K</u>	<u>Y</u>	A	S	Q	S	<u>I</u>	<u>S</u>	G	I	P
61	D	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	R	L	E
60	D	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	R	L	E
81	P	E	D	F	A	V	Y	Y	C	Q	Q	Y	G	S	L	G	R	T	F	G
80	P	E	D	F	A	V	Y	Y	C	Q	<u>Q</u>	<u>S</u>	<u>N</u>	<u>S</u>	<u>W</u>	<u>P</u>	<u>H</u>	<u>T</u>	F	G
101	Q	G	T	K	V	E	I	K												
100	Q	G	T	K	V	E	I	K												

FIGURE 40A

1	Q	V	Q	L	M	Q	S	G	A	E	V	K	K	P	G	S	S	V	R	V
1	Q	V	Q	L	<u>V</u>	Q	S	G	A	E	V	K	K	P	G	S	S	V	R	V
21	S	C	K	T	S	G	G	T	F	V	D	Y	K	G	L	W	V	R	Q	A
21	S	C	K	<u>A</u>	S	G	<u>Y</u>	<u>S</u>	<u>F</u>	<u>T</u>	<u>G</u>	<u>Y</u>	<u>T</u>	<u>M</u>	<u>N</u>	W	V	R	Q	A
41	P	G	K	G	L	E	W	V	G	Q	I	P	L	R	F	N	G	E	V	K
41	P	G	K	G	L	E	W	V	G	<u>L</u>	<u>I</u>	<u>N</u>	<u>P</u>	<u>Y</u>	<u>N</u>	<u>G</u>	<u>G</u>	<u>T</u>	<u>S</u>	<u>Y</u>
61	N	P	G	S	V	V	R	V	S	V	S	L	K	P	S	F	N	Q	A	H
61	<u>N</u>	<u>Q</u>	<u>K</u>	<u>F</u>	<u>K</u>	<u>G</u>	<u>R</u>	<u>V</u>	<u>T</u>	V	S	L	K	P	S	F	N	Q	A	<u>Y</u>
81	M	E	L	S	S	L	F	S	E	D	T	A	V	Y	Y	C	A	R	E	Y
81	M	E	L	S	S	L	F	S	E	D	T	A	V	Y	Y	C	<u>T</u>	<u>R</u>	<u>R</u>	
101	G	F	D	T	S	D	Y	Y	Y	Y	Y	W	G	Q	G	T	L	V	T	V
100	<u>G</u>	<u>F</u>			<u>R</u>	<u>D</u>	<u>Y</u>	<u>S</u>	<u>M</u>	<u>D</u>	<u>Y</u>	W	G	Q	G	T	L	V	T	V
121	S	S																		
118	S	S																		

FIGURE 40B

jb16

```
      10      20      30      40      50      60
TAGATCTAGA CCACCATGGT TTTCACACCT CAGATACTAG GACTCATGCT CTTCTGGATT

      70      80      90     100     110     120
TCAGCCTCCA GAGGTGAAAT TGTGCTAACT CAGTCTCCAG GCACCCTAAG CTTATCACCG
```

GGAGAAAGG

jb17

```
      10      20      30      40      50      60
TAGACAGAAT TCACGCGTAC TTGATAAGTA GACGTGGAGC TTGTCCAGGT TTTTGTGGT

      70      80      90     100     110     120
ACCAGTGTAG GTTGTTGCTA ATACTTTGGC TGGCCCTGCA GGAAAGTGTA GCCCTTTCTC
```

CCGGTGAT

jb18

```
      10      20      30      40      50      60
AAGAGAATTC ACGCGTCCCA GTCCATCTCT GGAATACCCG ATAGGTTTCAG TGGCAGTGGA

      70      80      90     100     110
TCAGGGACAG ATTTCACTCT CACAATAAGT AGGCTCGAGC CGGAAGATTT TGC
```

jb19

```
      10      20      30      40      50      60
TAGATCTAGA GTTGAGAAGA CTAATTACGT TTTATTTCTA CCTTGGTCCC TTGTCCGAAC

      70      80      90     100     110
GTATGAGGCC AACTGTTACT CTGTTGACAA TAATACACAG CAAAATCTTC CGGCTC
```

FIGURE 41A

jb20

10 20 30 40 50 60
TATATCTAGA CCACCATGGG ATGGAGCTGG ATCTTTCTCT TCCTCCTGTC AGGAACTGCA
70 80 90 100 110 120
GGTGTCCACT CTCAAGTCCA ACTGGTACAG TCTGGAGCTG AGGTAAAAA GCCTGGAAGT
130
TCAGTAAGAG TTTC

jb21

10 20 30 40 50 60
TATATAGGTA CCACCATTGT AAGGATTAAT AAGTCCAACC CACTCAAGTC CTTTTCCAGG
70 80 90 100 110 120
TGCCTGTCTC ACCCAGTTCA TGGTATACCC AGTGAATGAG TATCCGGAAG CTTTGCAGGA
130
AACTCTTACT GAAC

jb22

10 20 30 40 50 60
TATATAGGTA CCAGCTACAA CCAGAAGTTC AAGGGCAGAG TTACAGTTTC TTTGAAGCCT
70 80 90 100 110
TCATTTAACC AGGCCTACAT GGAGCTCAGT AGTCTGTTTT CTGAAGACAC TGCAGT

jb23

10 20 30 40 50 60
TATATCTAGA GGCCATTCTT ACCTGAGGAG ACGGTGACTA AGGTTCCCTG ACCCCAGTAG
70 80 90 100 110
TCCATAGAAT AGTCTCGAAA CCCCCGTCTT GTACAGTAAT AGACTGCAGT GTCTTC

FIGURE 41B

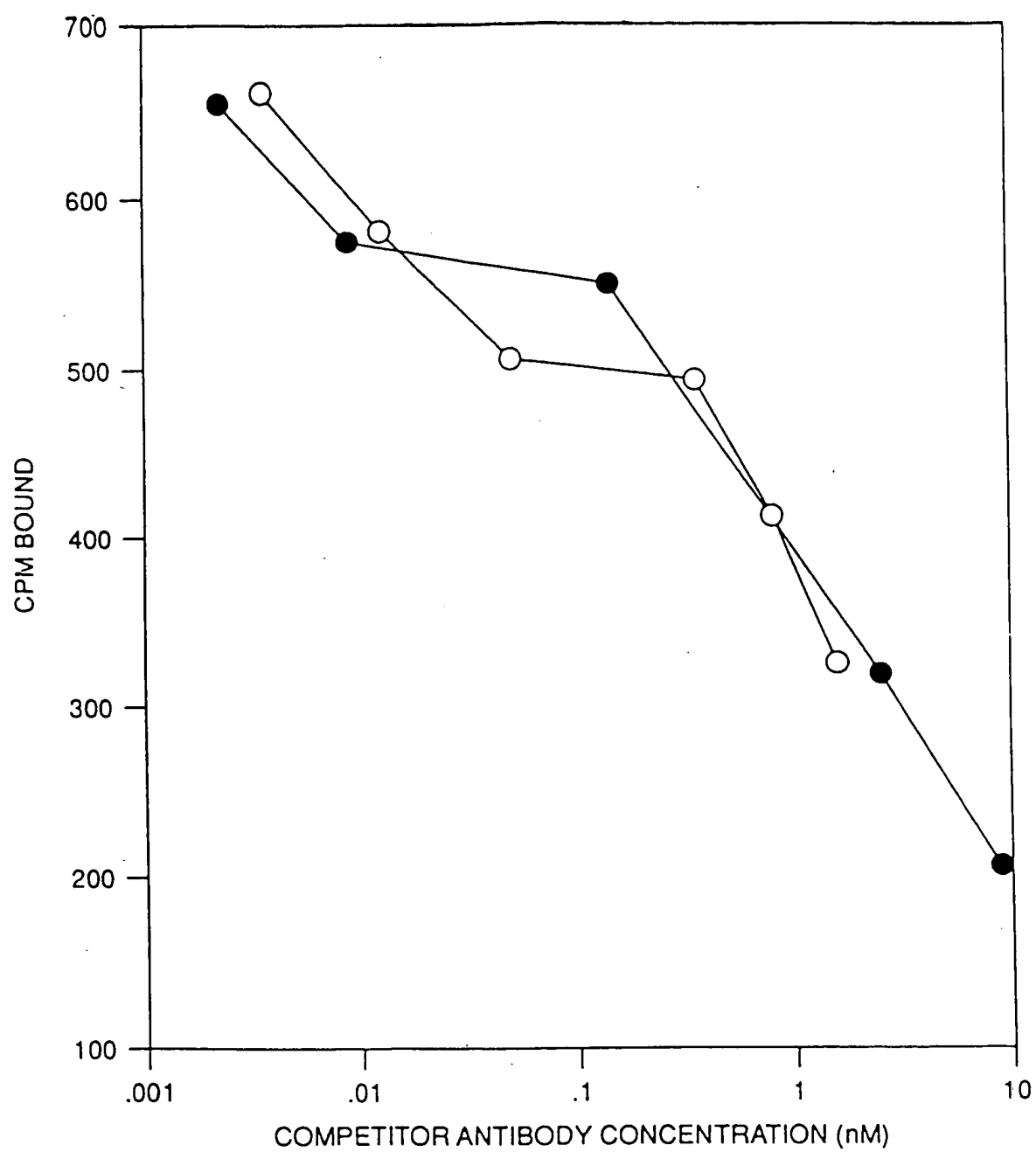


FIGURE 42

30 60
ATGCATCAGACCAGCATGGGCATCAAGATGGAATCACAGACTCTGGTCTTCATATCCATA
M H Q T S M G I K M E S Q T L V F I S I

90 120
CTGCTCTGGTTATATGGTGCTGATGGGAACATTGTTATGACCCAATCTCCCAAATCCATG
L L W L Y G A D G N I V M T Q S P K S M

150 180
TACGTGTCAATAGGAGAGAGGGTCACCTTGAGCTGCAAGGCCAGTGAAAATGTGGATACT
Y V S I G E R V T L S C K A S E N V D T

210 240
TATGTATCCTGGTATCAACAGAAACCAGAGCAGTCTCCTAAACTGCTGATATATGGGGCA
Y V S W Y Q Q K P E Q S P K L L I Y G A

270 300
TCCAACCGGTACACTGGGGTCCACGATCGCTTCACGGGCAGTGGATCTGCAACAGATTTC
S N R Y T G V H D R F T G S G S A T D F

330 360
ACTCTGACCATCAGCAGTGTGCAGGCTGAAGACCTTGCAGATTATCACTGTGGACAGAGT
T L T I S S V Q A E D L A D Y H C G Q S

390
TACAACTATCCATTACGTTCTGGCTCGGGGACAAAGTTGGAAATAAAG
Y N Y P F T F G S G T K L E I K

FIGURE 43A

30 60
 ATGACATCACTGTTCTCTCTACAGTTACCGAGCACACAGGACCTCGCCATGGGATGGAGC
 M T S L F S L Q L P S T Q D L A M G W S

90 120
 TGTATCATCCTCTTCTTGGTAGCAACAGCTACAGGTGTCCTCTCCCAGGTCCAAGTGCAG
 C I I L F L V A T A T G V L S Q V Q L Q

150 180
 CAGCCTGGGGCTGACCTTGTGATGCCTGGGGCTCCAGTGAAGCTGTCCTGCTTGGCTTCT
 Q P G A D L V M P G A P V K L S C L A S

210 240
 GGCTACATCTTCACCAGCTCCTGGATAAACTGGGTGAAGCAGAGGCCTGGACGAGGCCTC
 G Y I F T S S W I N W V K Q R P G R G L

270 300
 GAGTGGATTGGAAGGATTGATCCTTCCGATGGTGAAGTTCACTACAATCAAGATTTCAAG
 E W I G R I D P S D G E V H Y N Q D F K

330 360
 GACAAGGCCACACTGACTGTAGACAAATCCTCCAGCACAGCCTACATCCAAGTCAACAGC
D K A T L T V D K S S S T A Y I Q L N S

390 420
 CTGACATCTGAGGACTCTGCGGTCTATTACTGTGCTAGAGGATTTCTGCCCTGGTTTGCT
 L T S E D S A V Y Y C A R G F L P W F A

450
 GACTGGGGCCAAGGGACTCTGGTCACTGTCTCTGCA
D W G Q G T L V T V S A

FIGURE 43B

1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
1	D	I	Q	M	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T
21	I	T	C	R	A	S	Q	S	I	N	T	W	L	A	W	Y	Q	Q	K	P
21	I	T	C	<u>K</u>	<u>A</u>	<u>S</u>	<u>E</u>	<u>N</u>	<u>V</u>	<u>D</u>	<u>T</u>	<u>Y</u>	<u>V</u>	<u>S</u>	W	Y	Q	Q	K	P
41	G	K	A	P	K	L	L	M	Y	K	A	S	S	L	E	S	G	V	P	S
41	G	K	A	P	K	L	L	<u>I</u>	Y	<u>G</u>	<u>A</u>	<u>S</u>	<u>N</u>	<u>R</u>	<u>Y</u>	<u>T</u>	G	V	P	S
61	R	F	I	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P
61	R	F	<u>S</u>	G	S	G	S	G	T	<u>D</u>	F	T	L	T	I	S	S	L	Q	P
81	D	D	F	A	T	Y	Y	C		Q	Q	Y	N	S	D	S	K	M	F	G
81	D	D	F	A	T	Y	Y	C	<u>G</u>	<u>Q</u>	<u>S</u>	<u>Y</u>	<u>N</u>		<u>Y</u>	<u>P</u>	<u>F</u>	<u>T</u>	<u>F</u>	<u>G</u>
100	Q	G	T	K	V	E	V	K												
100	Q	G	T	K	V	E	V	K												

FIGURE 44A

1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
1	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V
21	S	C	K	A	S	G	<u>G</u>	<u>T</u>	<u>F</u>	<u>S</u>	<u>R</u>	<u>S</u>	<u>A</u>	<u>I</u>	<u>I</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
21	S	C	K	A	S	G	<u>Y</u>	<u>I</u>	<u>F</u>	<u>T</u>	<u>S</u>	<u>S</u>	<u>W</u>	<u>I</u>	<u>N</u>	<u>W</u>	<u>V</u>	<u>R</u>	<u>Q</u>	<u>A</u>
41	P	G	Q	G	L	E	W	M	G	G	I	V	P	M	F	G	P	P	N	Y
41	P	G	Q	G	L	E	W	M	G	<u>R</u>	<u>I</u>	<u>D</u>	<u>P</u>	<u>S</u>	<u>D</u>	<u>G</u>	<u>E</u>	<u>V</u>	<u>H</u>	<u>Y</u>
61	A	Q	K	F	Q	G	R	V	T	I	T	A	D	E	S	T	N	T	A	Y
61	<u>N</u>	<u>Q</u>	<u>D</u>	<u>F</u>	<u>K</u>	<u>D</u>	R	V	T	I	T	A	D	E	S	T	N	T	A	Y
81	M	E	L	S	S	L	R	S	E	D	T	A	F	Y	F	C	A	G	G	Y
81	M	E	L	S	S	L	R	S	E	D	T	A	<u>V</u>	<u>Y</u>	<u>Y</u>	C	A	<u>R</u>	<u>G</u>	<u>F</u>
101	G	I	Y	S	P	E	E	Y	N	G	G	L	V	T	V	S	S			
101	<u>L</u>	<u>P</u>	<u>W</u>	<u>F</u>	<u>A</u>	<u>D</u>	<u>W</u>	<u>G</u>	<u>Q</u>	<u>G</u>	<u>T</u>	L	V	T	V	S	S			

FIGURE 44B

rh10

10	20	30	40	50	60
TTTTTTCTAG	ACCACCATGG	AGACCGATAC	CCTCCTGCTA	TGGGTCCTCC	TGCTATGGGT
70	80	90	100	110	120
CCCAGGATCA	ACCGGAGATA	TTCAGATGAC	CCAGTCTCCG	TCGACCCTCT	CTGCT

rh11

10	20	30	40	50	60
TTTTAAGCTT	GGGAGCTTTG	CCTGGCTTCT	GCTGATACCA	GGATACATAA	GTATCCACAT
70	80	90	100	110	120
TTTCACTGGC	CTTGCAAGTT	ATGGTGACCC	TATCCCCGAC	GCTAGCAGAG	AGGGTCGACG

rh12

10	20	30	40	50	60
TTTTAAGCTT	CTAATTTATG	GGGCATCCAA	CCGGTACACT	GGGGTACCTT	CACGCTTCAG
70	80	90	100	110	120
TGGCAGTGGA	TCTGGGACCG	ATTTACCCCT	CACAATCAGC	TCTCTGCAGC	CAGATGAT

rh13

10	20	30	40	50	60
TTTTTTCTAG	AGCAAAAGTC	TACTTACGTT	TGACCTCCAC	CTTGGTCCCC	TGACCGAACG
70	80	90	100	110	120
TGAATGGATA	GTTGTAAGTC	TGTCCGCAGT	AATAAGTGGC	GAAATCATCT	GGCTGCAGAG

FIGURE 45A

rh20

```

      10      20      30      40      50      60
TTTTTCTAGA CCACCATGGG ATGGAGCTGG ATCTTTCTCT TCCTCCTGTC AGGTACCGCG
      70      80      90     100     110
GGCGTGCACT CTCAGGTCCA GCTTGTCCAG TCTGGGGCTG AAGTCAAGAA ACCT

```

rh21

```

      10      20      30      40      50      60
TTTTGAATTC TCGAGACCCT GTCCAGGGGC CTGCCTTACC CAGTTTATCC AGGAGCTAGT
      70      80      90     100     110     120
AAAGATGTAG CCAGAAGCTT TGCAGGAGAC CTTACGGAG CTCCCAGGTT TCTTGACTTC

```

A

rh22

```

      10      20      30      40      50      60
TTTTGAATTC TCGAGTGGAT GGGAAGGATT GATCCTTCCG ATGGTGAAGT TCACTACAAT
      70      80      90     100     110     120
CAAGATTTCA AGGACCGTGT TACAATTACA GCAGACGAAT CCACCAATAC AGCCTACATG
      130
GAACTGAGCA GCCTGAG

```

rh23

```

      10      20      30      40      50      60
TTTTTCTAGA GGTTTTAAGG ACTCACCTGA GGAGACTGTG ACCAGGGTTC CTTGGCCCCA
      70      80      90     100     110     120
GTCAGCAAAC CAGGCGAGAA ATCCTCTTGC ACAGTAATAG ACTGCAGTGT CCTCTGATCT
      130
CAGGCTGCTC AGTT

```

FIGURE 45B

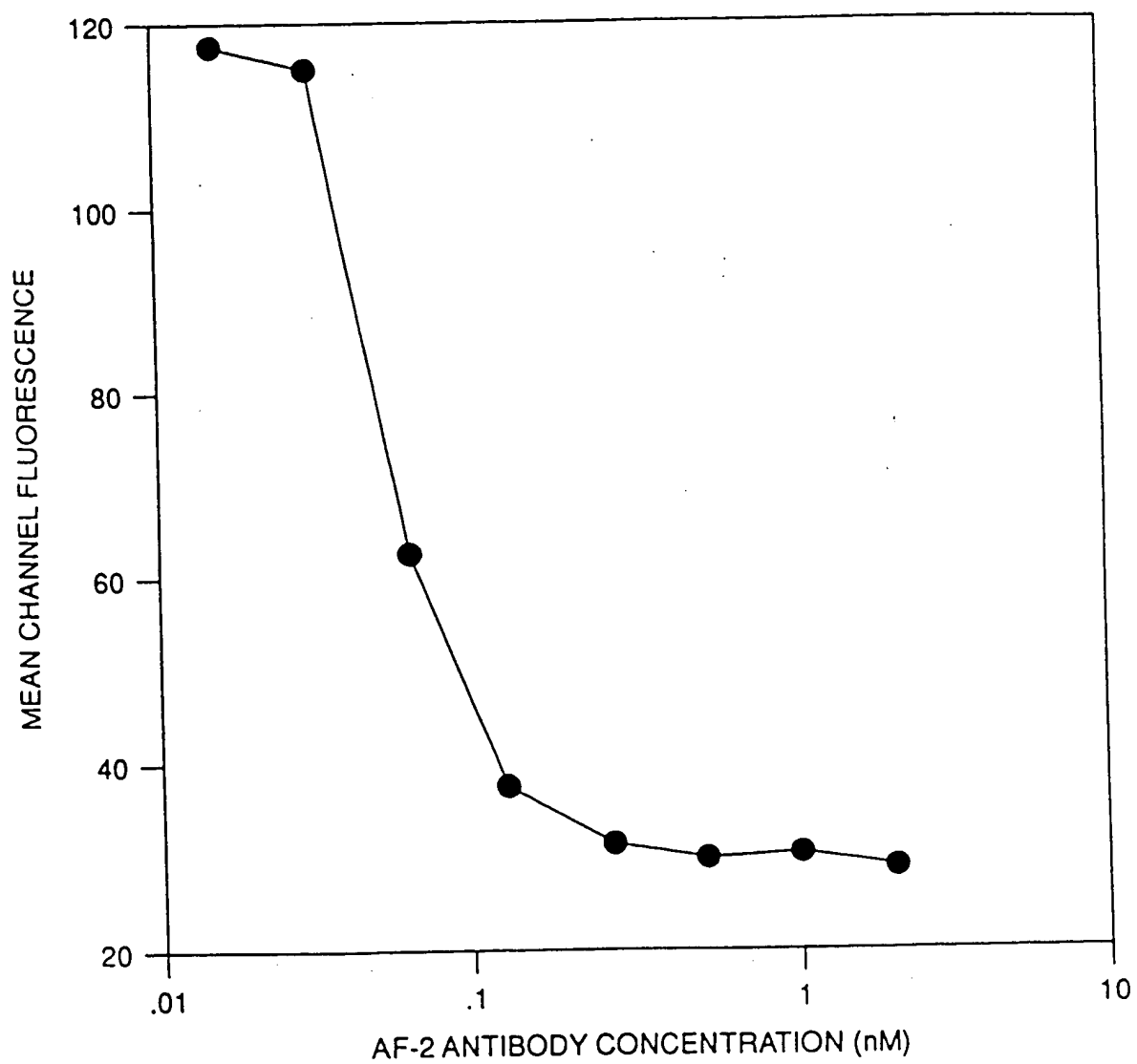


FIGURE 46